SN5557

In Reply Refer To: MS 5421
OCS-G 4166

December 31, 1991

ACTION

Transcontinental Gas Pipe Line Corporation Right-of-way

RELINQUISHMENT OF RIGHT-OF-WAY GRANT
ABANDONMENT OF PIPELINE

On September 25, 1979, Transcontinental Gas Pipe Line Corporation filed an application for a right-of-way two hundred feet (200') in width to construct, maintain, and operate a 16 inch natural gas pipeline, 1.41 miles in length, from McMoRan OFFSHORE EXPLORATION CO.'s proposed Platform "FP" in Block 25, Vermilion Area, to a subsea tie-in with Transcontinental Gas Pipe Line Corporation's existing 20-inch pipeline (OCS 0876) in Block 26, Vermilion Area. By Decision dated October 30, 1979, the application was approved and the right-of-way granted. Proof of construction was subsequently accepted on January 28, 1981.

On November 8, 1991, Transcontinental Gas Pipe Line Corporation requested relinquishment of the right-of-way in its entirety. Grantee indicates that the pipeline was abandoned in place on September 8, 1991, in accordance with 30 CFR 250, Subpart J.

Inasmuch as grantee has complied with 30 CFR 250, Subpart J, removal of the 1.41 miles of line pipe is hereby waived. However, in the future, should it be determined that this pipeline constitutes a hazard to navigation or commercial fishing operations or unduly interferes with other uses of the OCS, Transcontinental Gas Pipe Line Corporation shall be required to remove it.

Therefore, the pipeline right-of-way grant is relinquished effective as of November 8, 1991, the date the request for relinquishment was filed in this office.

J. Rogers Pearcy
Regional Director

cc: Case File

MHHolmes/

SN5557

Dr map 2/26/92 BS

United States Department of the Interior

MINERALS MANAGEMENT SERVICE
GULF OF MEXICO OCS REGION
1201 ELMWOOD PARK BOULEVARD
NEW ORLEANS, LOUISIANA 70123-2394

In Reply Refer To: MS 5421
OCS-G 4166

December 31, 1991

ACTION

Transcontinental Gas Pipe Line Corporation — Right-of-way

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ABANDONMENT OF PIPELINE

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J. Rogers Pearcy
Regional Director

cc: Case File

UNITED STATES GOVERNMENT
MEMORANDUM

11-13-91

To: Leasing Activities Section, Adjudication Unit (MS 5421)

From: Petroleum Engineer, Pipeline Unit, Plans and Pipeline Section, Field Operations, GOM OCS Region (MS 5232)

Subject: Abandonment of Pipeline/Relinquishment of Pipeline Right-of-Way

The attached application for the abandonment in place of pipeline Segment No. 5557 and the relinquishment of the existing right-of-way OCS-G 4166 has been reviewed. This application and associated waiver request should be granted.

Mark Conner

Attachment

cc: 1502-01 P/L OCS-G (MS 5232)

MConner:

Transcontinental Gas Pipe Line Corporation
A Transco Energy company

2800 Post Oak Boulevard
P O Box 1396
Houston, Texas 77251-1396
713-439-2000

October 30, 1991

Regional Supervisor, Field Operations
Minerals Management Service
Gulf of Mexico OCS Region
1201 Elmwood Park Blvd.
New Orleans, LA 70123-2394

Attention: Ms. Mary Holmes
MS 5421

Re: OCS-G 4166 - Abandonment of 16" Pipeline and Relinquishment of Right-of-Way for an Existing 16" Pipeline from Block 25 to Block 26, Vermilion Area, Offshore Louisiana, Gulf of Mexico, Line No. 2-101-24-21

Dear Ms. Holmes:

Transcontinental Gas Pipe Line Corporation (Transco) is the holder of the Right-of-Way in Decision OCS-G 4166 issued by the United States Department of the Interior, Bureau of Land Management. Said right-of-way is described as follows:

> "A Right-of-Way 200 feet in width for the construction, maintenance, and operation of a 16-inch natural gas pipeline, 1.41 miles in length, from McMoRan OFFSHORE EXPLORATION CO.'s proposed Platform "FP" in Block 25, Vermilion Area, to a subsea tie-in with Transcontinental's existing 20-inch pipeline (OCS 0876) in Block 26, Vermilion Area."

In accordance with 30 CFR 250.164, Transco wishes to release, relinquish and surrender to the United States of America, all of its rights, title and interest, in that right-of-way described above.

We hereby request your approval and acceptance of the right-of-way relinquishment from Block 25 to Block 26, Vermilion Area.

ACCEPTED
J. Rogers Pearcy
Regional Director
Effective Date NOV 8 1991

The pipeline was abandoned in place in compliance with requirements of 30 CFR 250.156(a)(1) on September 8, 1991, as depicted on Drawing No. 22-6029/DI-4B-001. Accordingly, we request a written waiver of the removal requirements contained in 30 CFR 250.159(c)(9).

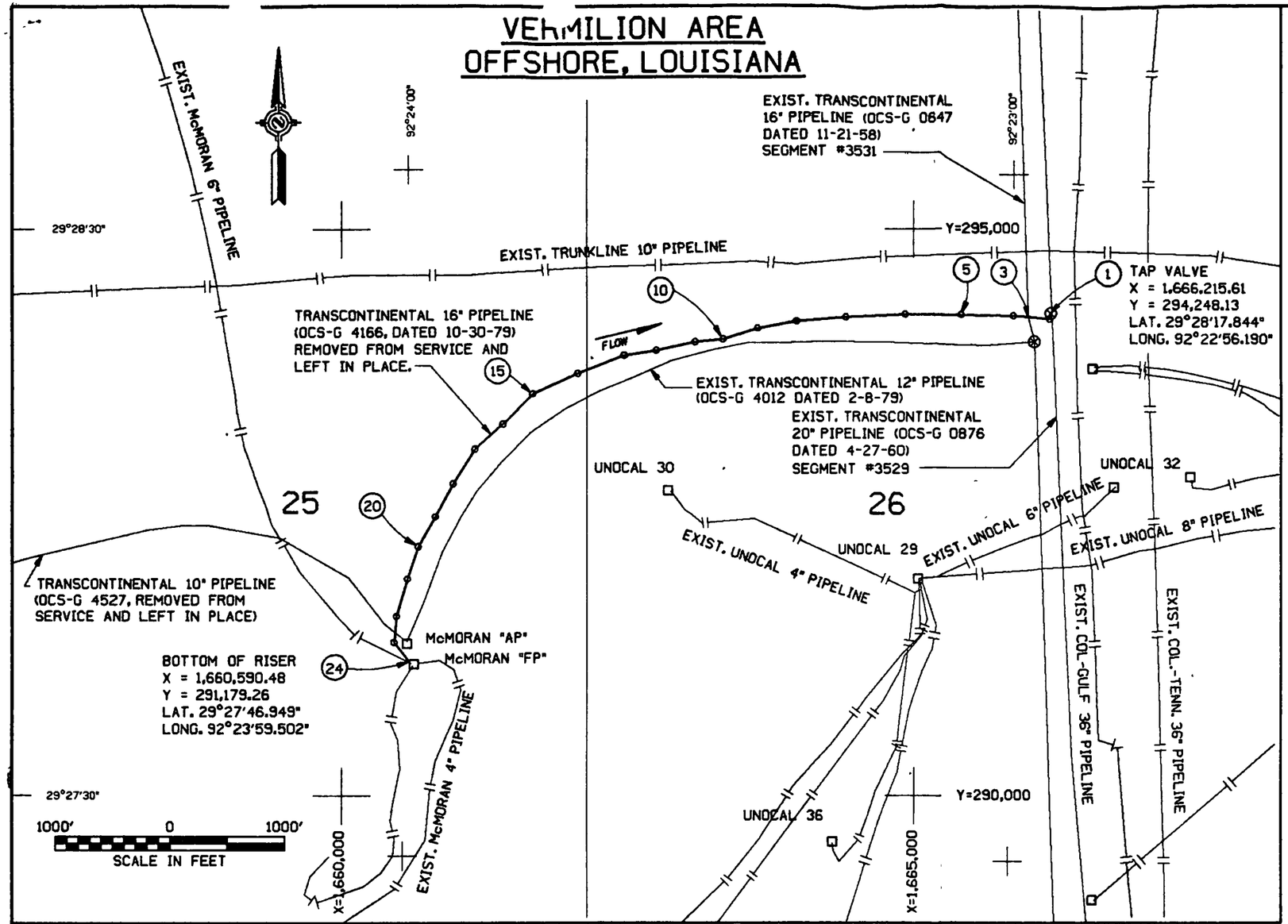
Sincerely,

Michael D Zagata

Michael D. Zagata, Vice President
Environmental and Safety Affairs

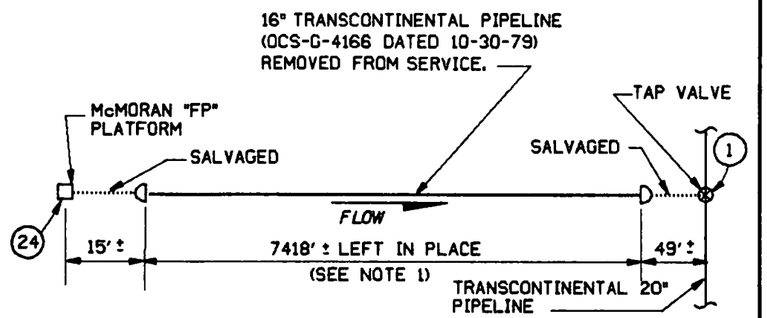
MDZ/CGP/dd

VERMILION AREA
OFFSHORE, LOUISIANA



PT. NO.	X	Y	REMARKS
1	1,666,215.61	294,248.13	TAP VALVE
2	1,666,204.48	294,198.91	16" PIPELINE
3	1,666,015.93	294,216.59	16" P/L CROSSING
4	1,665,886.00	294,228.77	16" PIPELINE
5	1,665,431.08	294,239.96	"
6	1,664,927.60	294,242.57	"
7	1,664,405.71	294,218.57	"
8	1,663,977.01	294,180.88	"
9	1,663,637.32	294,119.18	"
10	1,663,333.41	294,022.68	"
11	1,663,090.43	293,996.73	"
12	1,662,749.05	293,921.89	"
13	1,662,467.86	293,878.22	"
14	1,662,061.26	293,716.74	"
15	1,661,669.80	293,539.91	"
16	1,661,412.93	293,272.80	"
17	1,661,167.15	293,052.90	"
18	1,660,975.99	292,747.12	"
19	1,660,819.73	292,456.35	"
20	1,660,670.84	292,193.45	"
21	1,660,574.43	291,906.39	"
22	1,660,480.26	291,575.64	"
23	1,660,458.10	291,346.46	16" PIPELINE
24	1,660,590.48	291,179.26	BOTTOM OF RISER

16" TRANSCONTINENTAL PIPELINE
(OCS-G-4166 DATED 10-30-79)
REMOVED FROM SERVICE.



NOTES:

1. THIS MAP DEPICTS THE AS-BUILT COORDINATE LOCATION OF THE TRANSCONTINENTAL GAS PIPE LINE CORPORATION 16" NATURAL GAS PIPELINE REPORTED TO THE MINERALS MANAGEMENT SERVICES ON TRANSCONTINENTAL'S PROOF OF CONSTRUCTION DRAWING NUMBER, 22-04-6029/DI-E-001 DATED 2-21-80. THE COMPANY HAS REMOVED THIS PIPELINE FROM SERVICE AND IS RELINQUISHING THE RIGHT-OF-WAY. IT WAS PURGED PRIOR TO BEING CAPPED ON BOTH ENDS AND FILLED WITH INHIBITED WATER. THE CAPPED ENDS WERE BURIED TO A DEPTH OF AT LEAST 3 FEET BELOW THE UNDISTURBED GULF BOTTOM.

RIGHT-OF-WAY GRANTED BY OCS-G 4166 DATED 10-30-79	= 7,481.89 FEET OR 1.42 MILES
RIGHT-OF-WAY TO BE RELINQUISHED	= 7,481.89 FEET OR 1.42 MILES
TOTAL RIGHT-OF-WAY REMAINING UNDER OCS-G 4166	= 0 FEET OR 0 MILES

2. COORDINATES AND DISTANCES ARE BASED UPON LOUISIANA STATE PLANE COORDINATE SYSTEM LAMBERT-SOUTH ZONE, 1927 NAD.
3. AS-BUILT RIGHT-OF-WAY TO BE RELINQUISHED IS 200 FEET WIDE.

STATE OF TEXAS
MICHAEL J. CARLSON
60877
REGISTERED PROFESSIONAL ENGINEER

10-11-91
DATE

Michael J. Carlson 60877
MANAGER OF SURVEY NUMBER

Transcontinental Gas Pipe Line Corporation
A Transco Energy company
Engineering Department
Houston, Texas

Reference Drawing | Dwg. No.

16" NATURAL GAS PIPELINE
REMOVED FROM SERVICE
BLOCK 25 TO BLOCK 26, VERMILION AREA
OFFSHORE, LOUISIANA

Drawn By M. RICKS	Date 10/10/91	Approved By R.O.G.	Date 10-11-91
Checked By C.W.W.	Date 10-10-91	Approved By Michael J. Carlson Engineer	
Approved By Drafting C.W.W.	Date 10-10-91		
W.O. No. 6104.43	Scale SHOWN	DWG. NO. 22-6029
Approved By Design	Sheet 1 of 1		DI-48-001

No. 1 | Date 10/11/91 | Revision: CORRECTED TITLE | By S.P. | R.O.G.

zf2i[140,11]d:14b60290.dgn

Form 4-1181 (July 1951)

Proof of Construction Accepted: 1/28/81

BILLING INDEX

BILLING [Bond ..... Fund symbol (Acq. lands only) ..... Serial No. OCS-G 4166

No bond ..... Expiration date ..... Type P/L R/W

Effective date lease issued, assignment, or report on structure	Units (Acres, miles, etc.)	Total rental rate	County distribution of total rental rate	County distribution (County name)
10/30/79	~~1.41 Mi.~~ 1.42 Mi.	$15.00	$30.00	Blocks 25 and 26, Vermilion Area

Relinquished NOV 8 1991

BILLS ISSUED

Year of lease	Date issued	Year of lease	Date issued
1979	10/30/79 pd.	6th	12/1/83 pd.
2d	12/1/79 pd.	7th	12/1/84 pd.
3d	12/1/80 pd.	8th	12/1/85 pd.
4th	12/1/81 pd.	9th	12/1/86 pd.
5th	12/1/82 pd.	10th	12/1/87 pd.

	Name	Address
Principal	Transcontinental Gas Pipe Line Corporation	P. O. Box 1396 Houston, Texas ~~77001~~ 77251
Assignee of undivided interest		
Operator		

4166 P/L Transcontinental Gas Pipe Line Corporation

12/1/88 pd.
12/1/89 pd.
12/1/90 pd.

SN 5557

BEST AVAILABLE COPY

United States Department of the Interior

IN REPLY REFER TO
OCS-G 4166

BUREAU OF LAND MANAGEMENT

NEW ORLEANS OUTER CONTINENTAL SHELF OFFICE
HALE BOGGS FEDERAL BUILDING
500 CAMP STREET—SUITE 841
NEW ORLEANS, LA. 70130

Vermilion Area

January 28, 1981

ACTION

Transcontinental Gas Pipe Line Corporation	:	Right of Way for Pipe Line
	:	Date of Permit: 10/30/79
	:	Decision Requesting Proof of Construction Dated:
	:	Proof of Construction Received: 12/29/80

Proof of Construction Accepted

The above-captioned permittee has submitted the evidence required by the law and regulations 43 CFR 3340.3(a). The proof of construction is hereby accepted and approved with minor deviations.

H. P. Sieverding
Acting Manager

cc: U. S. Geological Survey
(w/dwg. and reports)

Transcontinental Gas Pipe Line Corporation

A Subsidiary of Transco Companies Inc.

2700 South Post Oak Road
P. O. Box 1396
Houston, Texas 77001
713-871-8000

December 23, 1980

Mr. John L. Rankin, Manager
New Orleans OCS Office
Bureau of Land Management
Hale Boggs Federal Building
500 Camp Street, Suite 841
New Orleans, LA 70130

Re: 16" Pipeline Between McMoRan "FP" Platform in Block 25 to an Underwater Valve on Transco's 20" Pipeline, All Within the Vermilion Area
Line 2-101-24-21, R/W 1
OCS-G 4166

Dear Mr. Rankin:

In compliance with the United States Department of Interior's Code of Federal Regulations, Title 43 Part 3300, subpart 3340.3 and appropriate guidelines, we are enclosing three (3) copies of as-built drawing No. 22-04-6029/DI-E-001, together with three (3) copies of each of additional supporting information listed below, for the above captioned project:

Hydrostatic Test Procedure
Pressure and Temperature Charts
Hydrostatic Test Data Sheets

After your review, please issue Transcontinental your Decision of Proof of Construction Accepted.

Very truly yours,

Edward L. Wibner, Jr.

ELW:jl
Enclosures

Transcontinental Gas Pipe Line Corporation

Qualification Test Record

BEST AVAILABLE COPY

Account No.	Contract No. (Prime)
[illegible]	

Prime Contractor	Test Contractor
[illegible]	Double "L" Hydrotest [illegible]

Description & Location of Pipeline or Appurtenance Being Tested: [illegible] 16" VR 25 [illegible] to [illegible]

LINE DATA

Description of Pipe	Length of Test Section	From (M.P. or Blk.)	To (M.P. or Blk.)	Survey Station No.
OD [illegible] WT [illegible] Yld X 52	[illegible] mi	VR 25	VR [illegible]	From ___ To ___
OD 16" WT .438 Yld X 52	Test Section No.	Elevation of High Point [illegible]		Elevation of Low Point [illegible]
OD 16 WT .438 Yld X 42	Drawing Nos. (Alignment or Fabrication)			
OD 16 WT .500 Yld X 52	Pipe Manufacturer: KAIZER			Purchase Order No.: 24140

TEST DATA

Type of Test	Date Fill Started	Date Fill Completed	Water Treatment	Avg. Temp. Water, Air or Gas
Gas ___ Air ___ Water [illegible]	1-24-80	1-24-80	Chem. ___ Filter ___	[illegible]

General Weather Conditions	Location and Elevation Where Dead Weight Readings Taken
[illegible]	M.P. or Block Location VR 2[illegible] Elevation [illegible]

Minimum Test Pressure Specified (High Point)	Maximum Allowable Test Pressure (Low Point)
[illegible] PSI ([illegible] % of Specified Min. Yield)	2160 PSI ([illegible] % of Specified Min. Yield)

TEST WATER AND LEAK DATA

Fill Water	Source	Location	Survey Sta.	M.P. or Block
Test Water Disposal Point	Location		Survey Sta.	M.P. or Block
Leak or Test Failures During Test [illegible]	Location [illegible]		Survey Sta.	M.P. or Block
Acidity (pH) of Fill Water	During Fill	During Disposal		
Chemicals Added to Fill Water	Type	Quantity		

DEAD WEIGHT PRESSURE AND TEMPERATURE LOG

Date of Readings	Time of Readings	Pressure P.S.I.G.	Temperature of Ambient	Temperature of Ground	Temperature of Pipe	Remarks
1-2[illegible]	[illegible]	[illegible]	71 F			
	[illegible]	[illegible]	61			[illegible]
	[illegible]	2160	60		66 F	[illegible]
	[illegible]	2160	60		60	[illegible]
	[illegible]	21[illegible]	6[illegible]		6[illegible]	[illegible]
	[illegible]	2160	60		[illegible]	
	[illegible]	21[illegible]	60		60	
	[illegible]	2157	54		64	[illegible]
	[illegible]	2155	54		[illegible]	[illegible]
	[illegible]	2153	54		[illegible]	
	[illegible]	2153	54		[illegible]	
	[illegible]	2153	54		[illegible]	
	[illegible]	2153	54		[illegible]	
	[illegible]	2153	57		66	
	[illegible]	2153	57		6[illegible]	
	[illegible]	2153	56		6[illegible]	
	[illegible]	2153	56		[illegible]	[illegible]

RECEIVED
DEC 29 12 22 PM '80
BUR OF LAND MGMT.
OUTER CONTINENTAL SHELF OFFICE
NEW ORLEANS, LA

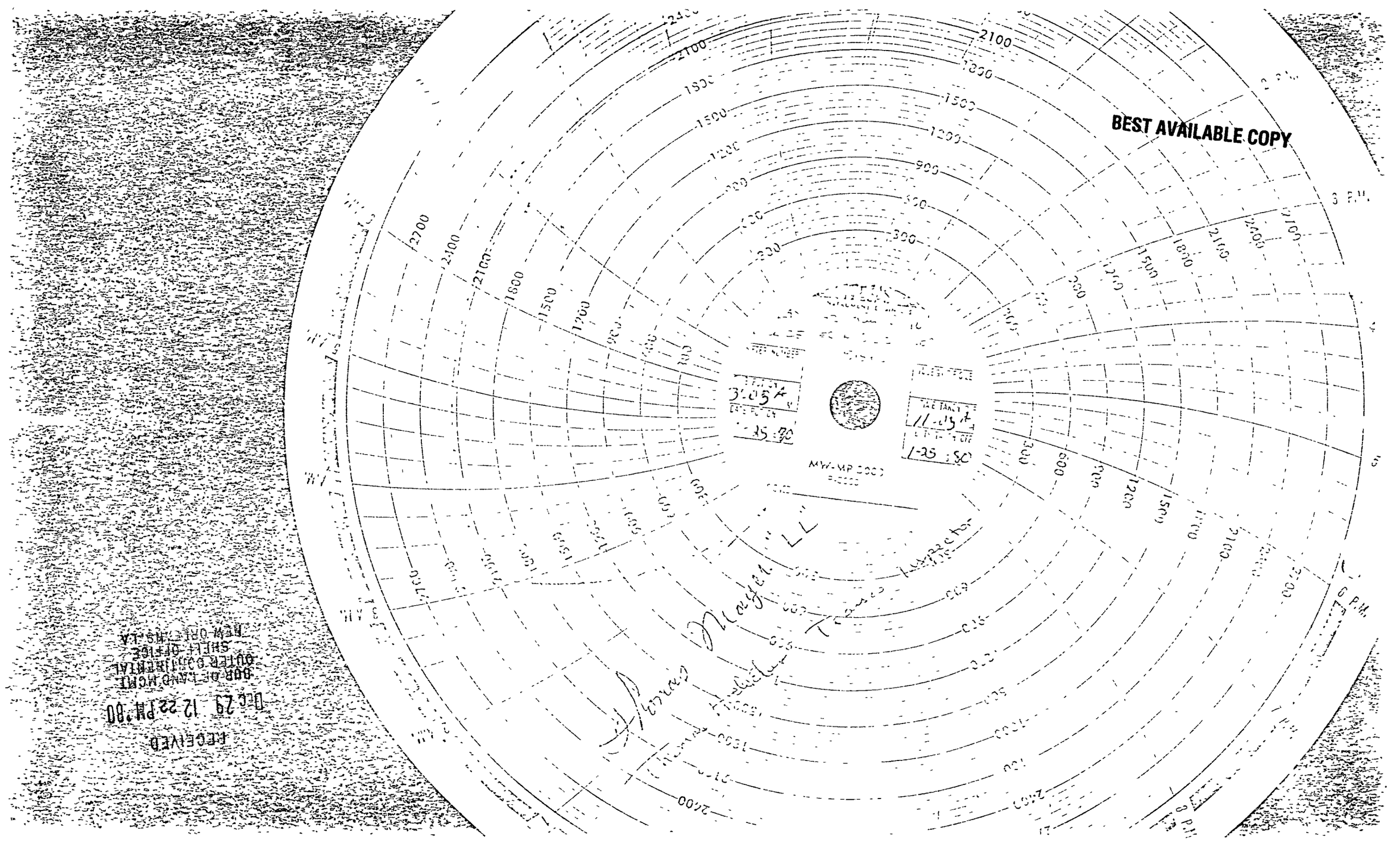
Report Prepared By	Date	Test Supervised By
[illegible]	[illegible]	

Test Witnessed By (1) [illegible] (2) [illegible] Title

Test Accepted By [illegible] Date 1-25-80

Attached To Original Copy: Pressure Charts [ ] Temperature Charts [ ] Profile Book Ref. ______

Distribution: 1. Pipe Line [illegible] Engineer [illegible]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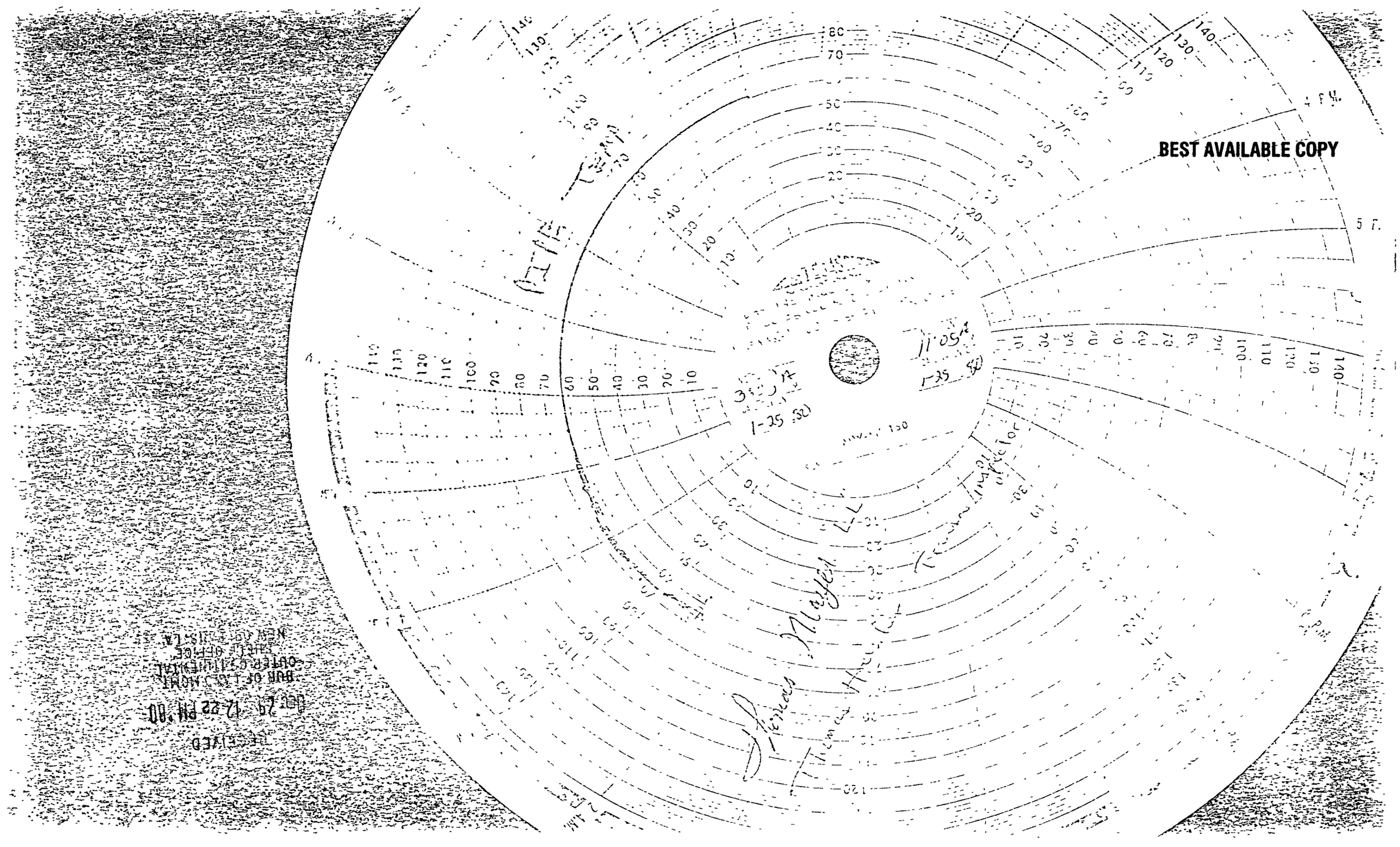
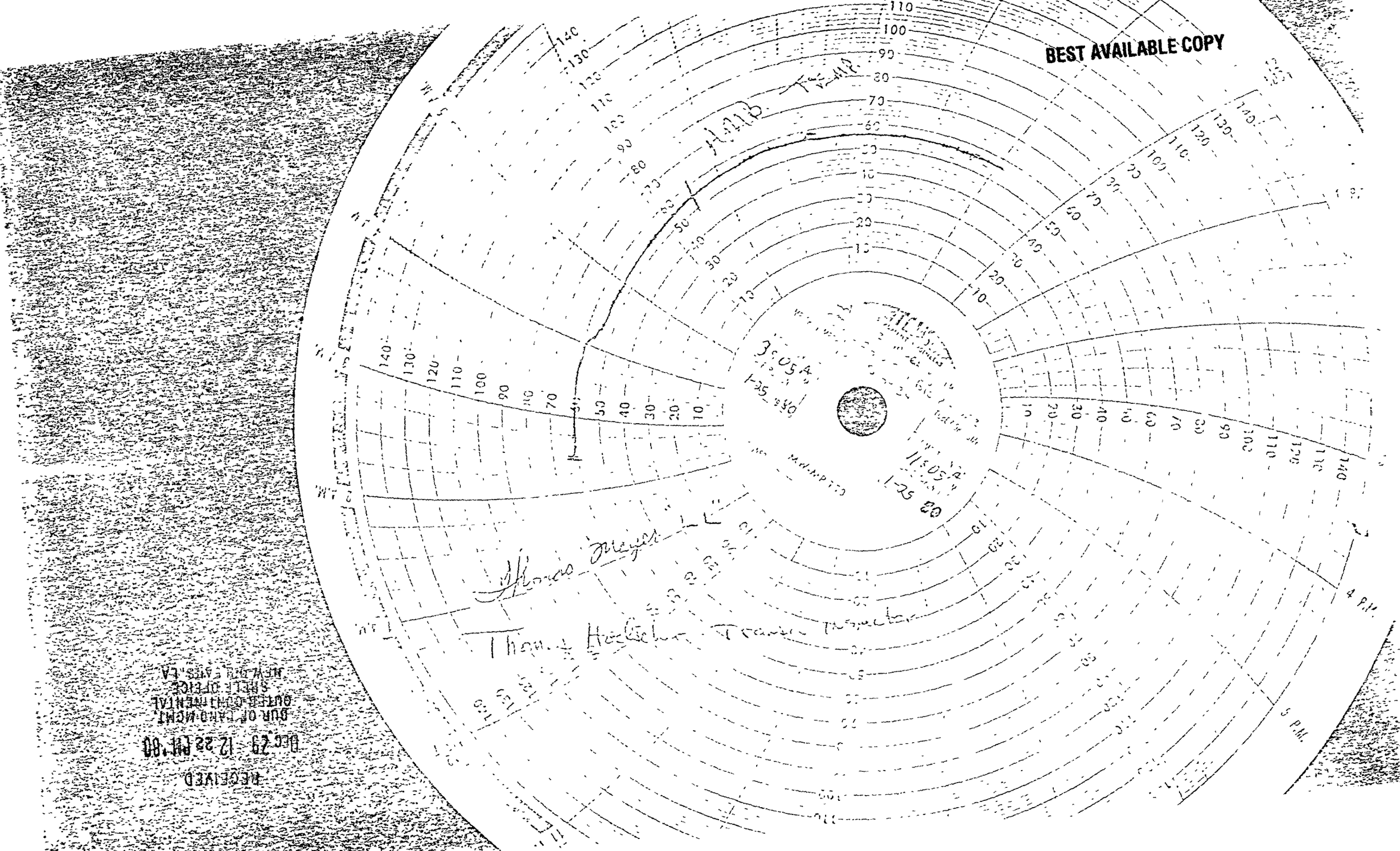
RECEIVED
DEC 29 12 22 PM '80
DOR OF LAND MGMT
OUTER CONTINENTAL
SHELF OFFICE
NEW ORLEANS LA
MW-MP 3000
3 P.M.
6 P.M.
9 P.M.





BEST AVAILABLE COPY

DOUBLE "L" HYDROTEST, INC.

ROUTE 2, BOX 8A • GONZALES, LOUISIANA 70737 • TELEPHONE: (504) 644-3048

CALIBRATION CERTIFICATE

This is to certify that this gauge has been inspected and calibrated.

Serial No. of Gauge 50 1037

Size of Gauge ________

Mfg. of Gauge Barton

Pressure of Range 0-150°F

TESTER READING	GAUGE READING
0°F	0°F
50°F	50°F
75°F	75°F
100°F	100°F
125°F	125°F
150 F	150°F

TYPE TESTER USED. Temperature Recorder

DATE TESTED: Oct. 2, 1977 BY [illegible signature]

DOUBLE "L" HYDROTEST, INC.
ROUTE 2, BOX 8A • GONZALES, LOUISIANA 70737 • TELEPHONE: (504) 644-3048

CALIBRATION CERTIFICATE

This is to certify that this gauge has been inspected and calibrated.

Serial No. of Gauge H-19
Size of Gauge 12"
Mfg. of Gauge NECO
Pressure of Range 0-3000

TESTER READING	GAUGE READING
0 PSI	0 PSI
100 PSI	100 PSI
500 PSI	500 PSI
1000 PSI	1000 PSI
1500 PSI	1500 PSI
2000 PSI	2000 PSI
2500 PSI	2500 PSI
3000 PSI	3000 PSI

TYPE TESTER USED. Pressure Recorder
DATE TESTED Oct 2, 1979 BY. [illegible]

DOUBLE "L" HYDROTEST, INC.
ROUTE 2, BOX 8A • GONZALES, LOUISIANA 70737 • TELEPHONE: (504) 644-3048

CALIBRATION CERTIFICATE

This is to certify that this gauge has been inspected and calibrated.

Serial No. of Gauge 35255-3
Size of Gauge 10"
Mfg. of Gauge H&S
Pressure of Range 50-3000

TESTER READING	GAUGE READING
50 PSI	50 PSI
100 PSI	100 PSI
500 PSI	500 PSI
1000 PSI	1000 PSI
1500 PSI	1500 PSI
2000 PSI	2000 PSI
2500 PSI	2500 PSI
3000 PSI	3000 PSI

TYPE TESTER USED. Dead Weights
DATE TESTED. Oct. 2, 1979 BY: [signature]

Transcontinental G pe Line Corporation
2700 South Post Oak Road
P O Box 1396
Houston Texas 77001

5.10 Testing

5.101 Onshore - This shall include all work and equipment for hydrostatically testing the completed platform piping, riser assemblies, valve assembly(s) and meter station(s) onshore.

The hydrostatic testing shall be performed after the piping has been assembled. Blind flanges and welding caps shall be used to blank openings where required.

Only fesh clean water shall be used for the test. All air shall be evacuated from the piping and displaced with water.

The minimum test pressure will be stated in the Job Description. Pressure shall be determined by a dead weight tester and corrected as necessary for changes in water temperature. Test data shall be recorded on T.G.P.L. Form 1250. The test period shall be for a duration of four (4) hours. Only test data indicating no pressure drop during the test period will be acceptable. If the piping does not meet this test, repairs as necessary shall be made, and the test repeated until an acceptable test is made.

The piping and meter station shall be cleared of all water and purged with air to remove all moisture residue.

5.102 Offshore - This specification covers the testing of the completed pipeline. The pipeline shall be tested using the fluid set out in the Job Description, after completing the cleaning and trenching operations. Contractor may, with the approval of Company, test the pipe in sections or prior to cleaning and trenching. This test, however, shall not be an acceptance test.

The test pressure shall be held on the pipeline for 8 hours after pressure stabilization and shall be checked by means of a standard dead weight gauge, and the data recorded on T.G.P.L. Form 1250. No drop in pressure, after making corrections for changes in temperature and barometric pressure, shall be allowed.

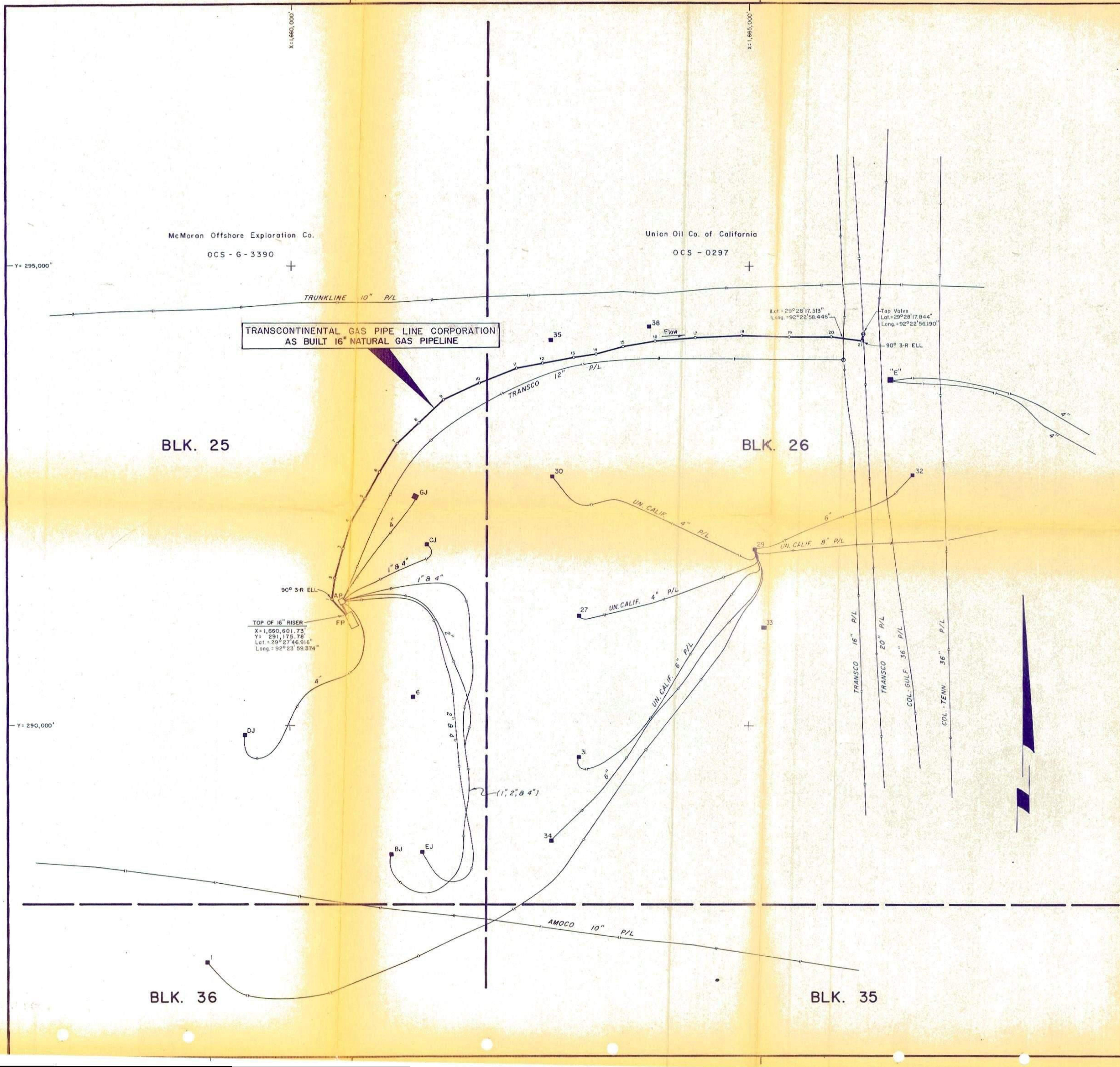
If the pipeline does not meet this test, such steps as necessary shall be taken to cause the pipeline to meet the requirements of the above test.

Transcontinental Gas Pipe Line Corporation
A Transco Companies Inc
2700 South Post Oak Road
P O Box 1396
Houston Texas 77001

5.102 Offshore (Continued)

After a hydrostatic test has been accepted, the pipeline shall be freed of water by running as many cylinders or squeegees as deemed necessary, but not less than two. These may be propelled with gas or air. If Company cannot conveniently make gas available Contractor shall furnish air. The Company will handle the gas if it is used for dewatering.

When the platform piping and meter station(s) have been hydrostatically tested independent of the pipeline, the piping shall be drained of all water and thoroughly dried internally by use of compressed air.



AS BUILT 16" NATURAL GAS P/L

PT.	X	Y
Bottom of Riser BLK. 25-FP	1,660,590.48'	291,179.26'
1	1,660,458.10'	291,346.46'
2	1,660,480.26'	291,575.64'
3	1,660,574.43'	291,906.39'
4	1,660,670.84'	292,193.45'
5	1,660,819.73'	292,456.35'
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18	1,664,927.60'	294,242.57'
19	1,665,431.08'	294,239.96'
20	1,665,886.00'	294,228.77'
16" P/L	1,666,015.93'	294,216.59'
21	1,666,204.48'	294,198.91'
TAP VAL.	1,666,215.61'	294,248.13'
TOTAL LENGTH = 7,481.89' (1.417 MILES)		

NOTES:

Bearings, Coordinates and Distances are based on Louisiana State Plane Coordinate System, South Zone.

This Map reflects the As-Built Coordinate Location of the above depicted pipeline as determined by a Tellurometer MRB-201 System. The Geographic location of this pipeline is landward of the two hundred (200) foot coutour line and was installed with the minimum of three (3) feet of cover below the undisturbed Gulf floor in keeping with decision number O.C.S. G-4166 dated October 30, 1979. This pipeline has been designed and constructed in accordance with the Department of Transportation Regulations Part 192; Title 49.

28 Jul '80 — DATE
11416 — NUMBER

Seg. 5557

Reference Drawing — Dwg. No.

Transcontinental Gas Pipe Line Corporation (A Subsidiary of Transco Companies Inc.)	Engineering Department, Houston, Texas

AS BUILT 16" NATURAL GAS PIPELINE
BLOCK 25 AND 26
VERMILION AREA
GULF OF MEXICO

Drawn By J.E.C.	Date 2/21/80	Approved By PEN	Date 7-21-80
Checked By C.L.	Date 6-11-80	Henry W. Ingram	
Approved By Drafting C.W.W.	Date 7-11-80	Approved By	Engineer
W.O. No.	Scale: 1" = 500'	General Group & Gun Number 22-04-6029	
	Sheet 1 of 1	Dwg. No. DI-E-001	

Revision | By | Date | No.

3340 (210)

March 24, 1980

Transcontinental Gas Pipe Line Corporation
Attention: Edward L. Wibner
P. O. Box 1396
Houston, Texas 77001

Gentlemen:

Please furnish proof of construction in accordance with 43 CFR 3340.3 on the following pipeline rights-of-way:

OCS-G Number	Decision Issued	OCS-G Number	Decision Issued
1377-D	8-19-75	4046	9-06-79
3458	8-23-77	4049	8-17-79
3831	3-27-79	4055	8-27-79
3833	8-28-78	4057	10-09-79
4017	6-06-79	4059	9-13-79
4019	4-26-79	4152	9-26-79
4022	6-06-79	4155	10-12-79
4025	7-05-79	4156	10-09-79
4032	8-08-79	4165	10-30-79
4041	10-09-79	4166	10-30-79

H. P. Sieverding
Acting Manager

210:DWild:prb:3/24/80

NOTIFICATION OF HYDROSTATIC TEST:

Company representative furnishing following information Andrew Curley

Telephone Number (504) 446-8841 Date 1-22-80

1. OCS Number G 4166
2. Name of Company TRANSCONTINENTAL GAS P/L COMPANY
3. Size of Pipeline 16" GAS
4. From where to where McMoran "FP" platform in Block 25 to subsea TIE IN Block 26 all located in Vermilion Area
5. Platform where hydrostatic test instruments will be set up "FP" platform in block 25 Vermilion Area.
6. Date and time they plan to start January 23, 1980

Notify: Frank Torres, U.S. Geological Survey, 837-4720, Ext. 237, or leave a message for him. N/A

BLM Employee: Barbara J. Britton 1-22-80

NOTIFICATION OF CONSTRUCTION:

Company representative furnishing the following information Mike Michelli (TRANSCO Exploration)

Telephone Number (504) 446-8841 Date 1-14-80

1. OCS Number G 4166
2. Name of Company TRANSCONTINENTAL GAS Pipeline Corp.
3. Name of Contractor BROWN & ROOT INC.
4. Name of lay barge #278
5. Size of Pipeline 16" GAS P/L 1.41 miles long
6. From where to where MC MORAN "EP" platform in Block 25 to Subsea tie with TRANSCONTINENTAL'S 20" P/L (OCS-0876) located in Block 26 all located in Vermilion Area.
7. Where construction begins and ends (i.e., which platform) ~~Subsea tie~~ MC MORAN "EP" platform in Block 25, Vermilion Area.
8. Method of laying Conventional
9. How long barge will be on job 5 days
10. Where heliports are available On Barge
11. Does the pipeline cross safety fairway(s)? (Go to map for information) NO

    Where _____

    Initial and teminal points: Initial: X = _____ Y = _____

    Terminal: X = _____ Y = _____

12. When the barge will begin (date) January 20, 1979

Notify: Frank Torres, U. S. Geological Survey, 837-4720, Ext. 237 (Give him items 1 10 & 12)). Date Contacted N/A

Notify only if construction crosses or in close proximity of fairways Chief O'Neil, Petty Officer Lutali, or Chief Flannegan, U. S. Coast Guard, telephone #6236 (upstairs). Give items 1 - 9 & 11 - 12. Date Contacted N/A

Items 1, 2, 5, 6, and 11 can be determined from the file if the company representative doesn't know them. Item 11 should be determined on a map in this office (see Bill Overstreet).

BLM Employee Audrey J. Bruton 1-15-80

NOTIFICATION OF CONSTRUCTION:

Company representative furnishing the following information Felix McHugh

Telephone Number 504 446-8843 Date 12-10-79

1. OCS Number G 4166
2. Name of Company TRANSCONTINENTAL GAS P/L CORP.
3. Name of Contractor CECCO Company
4. Name of lay barge # CMC 701 (JACK-UP rig)
5. Size of Pipeline 16" NATURAL GAS 1.41 miles long
6. From where to where McMoRan "FP" platform in Vermilion 25 to underwater TAP with TRANSCONTINENTAL'S 20" P/L in Vermilion 26
7. Where construction begins and ends (i.e., which platform) The Construction is for the installation of the HOT TAP at subsea tie location in Block 26 Vermilion
8. Method of laying —
9. How long barge will be on job 3 - days
10. Where heliports are available on McMoRan "FP" platform in Vermilion 25.
11. Does the pipeline cross safety fairway(s)? (Go to map for information) NO

    Where _____

    Initial and teminal points: Initial: X = _____ Y = _____

    Terminal: X = _____ Y = _____

12. When the barge will begin (date) January 1, 1980

Notify: Frank Torres, U. S. Geological Survey, 837-4720, Ext. 237 (Give him items 1 10 & 12)). Date Contacted N/A

Notify only if construction crosses or in close proximity of fairways Chief O'Neil, Petty Officer Lutali, or Chief Flannegan, U. S. Coast Guard, telephone #6236 (upstairs). Give items 1 - 9 & 11 - 12. Date Contacted N/A

Items 1, 2, 5, 6, and 11 can be determined from the file if the company representative doesn't know them. Item 11 should be determined on a map in this office (see Bill Overstreet).

BLM Employee Kathy J Britton 12-10-79

SN 5557

BEST AVAILABLE COPY

OCS-G 4166

Vermilion Area

October 30, 1979

Transcontinental Gas Pipe Line Corporation OCT 3 1 1979 Right-of-way

ACTION - APPLICATION APPROVED

Your application for a right-of-way 200 feet in width for the construction, maintenance, and operation of a 16-inch natural gas pipeline, 1.41 miles in length, from McMoRan OFFSHORE EXPLORATION CO.'s proposed Platform FP" in Block 25, Vermilion Area, to a subsea tie-in with Transcontinental's existing 20-inch pipeline (OCS 0876) in Block 26, Vermilion Area, dated September 21, 1979, with its attachments is hereby approved.

John L. Rankin
Manager

cc: Geological Survey, USDI
Office of Pipeline Safety Operations, USDT

NOTED--MC INTOSH

0895
10-23-79

BEST AVAILABLE COPY

United States Department of the Interior

GEOLOGICAL SURVEY

434 IMPERIAL OFFICE BLDG., N. CAUSEWAY BLVD
P.O. BOX 7944
METAIRIE, LOUISIANA 70010
TEL (504) 837-4720

NEW ORLEANS OCS
FILE CODE
ROUTE
MGR.
ASST. MGR.
OCT 15 1979
P. LEGAL
PAO
FAD
OPS
STUDIES
MGMT. SER.

In Reply Refer To: OS-5

OCT 12 1979

Memorandum

To: Manager, Bureau of Land Management, 841 Hale Boggs Federal Building, 500 Camp Street, New Orleans, Louisiana 70130

From: Conservation Manager, Gulf of Mexico Region

Subject: Transcontinental Gas Pipe Line Corporation's Pipeline Right-of-Way Application, BLM OCS-G 4166

RECEIVED
OCT 15 1979
BUR OF LAND MGMT
NEW ORLEANS, LA

We have reviewed the safety features and design specifications for the subject Right-of-Way Application, dated September 21, 1979, in accordance with the MOU dated August 1, 1974. It is for the construction, maintenance, and operation of a 16-inch gas and condensate pipeline 7,464 feet in length from McMoRan's proposed Platform "FP", Vermilion Block 25, lease OCS-G 3390, to a subsea tie-in with Transcontinental's existing 20-inch pipeline in Vermilion Block 26, lease OCS 0297.

Based upon information submitted in the application, the design characteristics of this pipeline are calculated to be as follows:

Pipeline Component	Maximum Allowable Operating Pressure/WP Ratings
Submerged component	1,656 psig
Riser component	2,344 psig
Valves, flanges, fittings	1,440 psig

The hydrostatic pressure test with water will be in the range of 2,115 to 2,161 psig for eight hours for the submerged component. The riser will be preinstallation-tested in the range of 4,312 to 4,405 psig for four hours. The ANSI 600 valves should not be subjected to a test-pressure differential greater than 1,440 psig. The ANSI 600 valves, flanges, and fittings should not be subjected to a body test greater than 2,175 psig.

Based on these calculations and a maximum allowable operating pressure (MAOP) of 1,174 psig of the receiving 20-inch Transcontinental Gas Pipe Line Corporation pipeline (BLM OCS ~~0647~~ 0876), we recommend that the MAOP for this pipeline be 1,174 psig and that this pressure may be exceeded only

when hydrostatically pressure-testing the pipeline. We also recommend that valves and taps at the subsea tie-in be provided with a minimum of three feet of cover, either through burial or with sandbags.

The technical aspects of the proposed pipeline are acceptable in accordance with appropriate regulations and standards.

We would appreciate receiving a copy of the plat showing the location of the pipeline as installed.

Harry A. DuPont

Acting Conservation Manager

4166

IN REPLY REFER TO
OCS-G 4166

United States Department of the Interior

BUREAU OF LAND MANAGEMENT

NEW ORLEANS OUTER CONTINENTAL SHELF OFFICE
HALE BOGGS FEDERAL BUILDING
500 CAMP STREET—SUITE 841
NEW ORLEANS, LA 70130

September 28, 1979

Memorandum

OCT 1 1979

To: Conservation Manager
Gulf of Mexico OCS Operations

From: Manager
New Orleans OCS Office

Subject: Transcontinental Gas Pipe Line Corporation's Pipeline Right-of-Way Application (OCS-G 4166)

In accordance with the memorandum of understanding between the Bureau of Land Management and U. S. Geological Survey signed August 1, 1979, the subject application is enclosed.

Please review the technical aspects of the proposed pipeline. If you have any questions regarding this matter, please contact Mr. Autry J. Britton of this office.

Enclosures (3)
1. Letter of Application dated September 21, 1979
2. Drawings No. 22-12-6029/D1-A-001; Sheets 1-4
3. Confirmation/Report of Telephone Conversation dated September 26, 1979

NOTED—MC INTOSH

NOTED – PATZ

Transcontinental Gas Pipe Line Corporation

A Subsidiary of Transco Companies Inc.

2700 South Post Oak Road
P. O. Box 1396
Houston, Texas 77001
713-871-8000

September 21, 1979

Mr. John L. Rankin, Manager
New Orleans OCS Office
Bureau of Land Management
Hale Boggs Federal Building
500 Camp Street, Suite 841
New Orleans, Louisiana 70130

Re: Application for right of way for proposed 16" pipeline Block 25 Vermilion Area to Block 26 Vermilion Area, Offshore Louisiana, Gulf of Mexico

Dear Mr. Rankin:

Pursuant to the authority granted in Section 5 (e) of the Outer Continental Shelf Lands Act (67 Stat. 462), (43 U.S.C. 1331), as amended (92 Stat. 629), and in compliance with the regulations contained in Title 43 CFR 3340, Transcontinental Gas Pipe Line Corporation hereby applies, in triplicate, for a right-of-way two hundred feet (200 ft.) in width to construct, maintain and operate a 16" natural gas pipeline as shown on the following drawings.

Archaeological and Hazard Survey Report
Vicinity, Route, Profile and
Cathodic Protection Drawing
Drawing Number 22-12-6029/DI-A-001

Schematic Drawing
Drawing Number 22-12-6029/DI-A-002

Typical Crossing Drawing
Drawing Number 22-0000/A-13850

The 16" pipeline will be used to transport natural gas and condensate from the proposed McMoRan "FP" platform in Block 25 Vermilion Area to a proposed underwater tap valve on Transcontinental's existing 20" pipeline (OCS-0876) located in Block 26 of the Vermilion Area, Gulf of Mexico.

In accordance with applicable regulations, the applicant agrees it will mail to each lessee or right-of-way holder whose lease or right-of-way is affected by this application, by registered mail, return receipt requested, a copy of the application and the maps attached hereto. A list of such lessees and right-of-way holders is attached and copies of the return receipts showing service upon such lessees and right-of-way holders will be forwarded to your office when received.

As set forth in the February 13, 1978 guidelines, and as amended the applicant agrees to the following:

1. The pipeline will be buried a minimum of three (3) feet below the mud line because the water depth does not exceed two hundred (200) feet.

2. The proposed pipeline will cross one (1) existing pipeline, maintaining a minimum separation of eighteen (18) inches between lines.

3. All valves and fittings on the submerged pipeline will be buried to a minimum of one (1) foot below the mud line.

4. Sensing devices and fail close valves will be installed as shown on the enclosed Schematic Drawing 22-12-6029/DI-A-002.

5. Three (3) copies of the Archaeological and Hazard survey report prepared for Transcontinental are enclosed.

   The route of the proposed right of way is northerly of and approximately parallel with the right of way granted to Transcontinental by Decision (OCS-G-4012) for the installation of its existing 12" pipeline. The enclosed Archaelogical and Hazard Survey Report is the same report previously submitted to your office with our application for right of way (OCS-G 4012).

   The 70 gamma anomaly located near the centerline of the proposed 16" pipeline was thoroughly investigated prior to installing the existing 12" line. Our investigation of the 70 gamma anomaly found it not to be a significant cultural resource. Supporting this investigation we enclose a report prepared by Martech International, Inc.

6. All changes, additions or deletions to any equipment on the pipeline will be made only after first securing the expressed written approval of your office.

7. Your office will be notified at least five (5) days prior to commencing construction and will be advised of construction date, approximate starting time, starting point, name of contractor and barge, availability of heliport facilities and approximate completion date.

8. Your office will be notified forty eight (48) hours in advance of the hydrostatic test and will be advised of the location of the pressure recorder and approximate starting time of the test. Hydrostatic test data, including procedure, hold time and results will be furnished your office within ninety (90) days following the test.

9. Within ninety (90) days after completion of construction, applicant will provide an as-built map establishing the location of the completed pipeline within an accuracy of +/- 100 feet, prepared in accordance with the requirements for the map depicting the proposed route reflecting the total length of the line (all in feet) and depicting those points, if any, at which the pipeline is located outside of the right of way.

10. Any break, leak, failure or accident will be reported within twelve (12) hours after such occurrence as provided for in said guidelines.

11. If any site, structure, or object of historical or archaeological significance should be discovered during the conduct of any operations within the permitted right-of-way it shall report immediately such findings to the Manager, New Orleans OCS Office, and make every reasonable effort to preserve and protect the cultural resource from damage until the Manager, New Orleans OCS Office, has given directions as to its preservation.

12. To comply with all regulations and conditions as may be prescribed by the Secretary of the Interior, or the Secretary of Transportation including, pursuant to section 21(b) of the OCS Lands Act, as amended, provisions to assure maximum environmental protection by utilization of the best available and safest technologies, including the safest practices for pipeline burial. This includes but is not limited to complying with the following stipulations:

    Transport or purchase without discrimination of oil or natural gas produced from submerged lands or Outer Continental Shelf lands in the vicinity of its pipeline in such proportionate amounts as the Federal Energy Regulatory Commission, in consultation with the Secretary of Energy, may, after a full hearing with due notice thereof to the interested parties, determine to be reasonable, taking into account, among other things, conservation and the prevention of waste.

    Operate its pipeline in accordance with the competitive principles set out in section 5(f)(1) of the Outer Continental Shelf Lands Act, as amended, except insofar as the Federal Energy Regulatory Commission may, by order or regulation, exempt such pipeline from any or all of the requirements of section 5(f)(1) pursuant to section 5(f)(2) (which permits such exemption of any pipeline or class of pipelines which feeds into a facility where oil and gas are first collected or a facility where oil and gas are first separated, dehydrated, or otherwise processed).

Unless so exempted by Federal Energy Regulatory Commission order or regulation, applicant shall operate its pipeline so as to provide open and nondiscriminatory access to both owner and nonowner shippers, and applicant shall comply with any specific conditions which the Secretary of Energy and the Federal Energy Regulatory Commission may require, after consultation with and due consideration given to the views of the Attorney General, to ensure that its pipeline is operated in accordance with the competitive principles set forth in section 5(f)(1).

Additional design criteria data is as follows:

1. The length of the 16" pipeline between the riser and underwater tap valve is 7,464 feet or 1.41 miles.

2. The line pipe will be:

   16.000" O.D. x .375" W.T., API 5L Gr. x-52, 62.58 lbs/ft.
   16.000" O.D. x .438" W.T., API 5L Gr. x-42, 72.80 lbs/ft.
   16.000" O.D. x .438" W.T., API 5L Gr. x-52, 72.80 lbs/ft.
   16.000" O.D. x .500" W.T., API 5L Gr. x-52, 82.77 lbs/ft.

3. The riser piping will be:

   16.000" O.D. x .625" W.T., API 5L Gr. x-60, 102.63 lbs/ft.

4. The products to be transported by the pipeline are natural gas and condensate.

5. The water depth is approximately 24 feet at the proposed McMoRan "FP" platform and approximately 20 feet at the existing Transcontinental 20" pipeline in Block 26 Vermilion Area.

6. The cathodic protection system will be Galvalum III bracelet anodes, as described on Dwg. 22-12-6029/DI-A-001, Sheet 4 of 4.

7. The products to be transported are natural gas and condensate, neither of which is corrosive to carbon steel pipe interior. However, the analysis of the transported product will be monitored and preventive measures such as pigging and/or inhibiting will be employed as necessary.

8. Protective coatings used on the underwater line pipe are:

   16" x .375" W.T., 1-1/2" concrete, 9/16" mastic.
   16" x .438" W.T., 1-1/4" concrete, 9/16" mastic.
   16" x .500" W.T., 1-1/4 concrete, 9/16" mastic.

9. The bulk specific gravity of the empty pipe in seawater is:

Pipe Size	Specific Gravity
16.000" O.D. x .375" W.T.	1.24
16.000" O.D. x .438" W.T.	1.27
16.000" O.D. x .500" W.T.	1.33

10. The anticipated specific gravity of the natural gas is 0.65 and the condensate is 0.72.

11. The design working pressure of the pipeline is as follows:

Maximum Allowable Operating Pressure based on valves and flanges will be 1,440 psig (maximum working pressure of ANSI 600# valves and flanges).

Maximum Allowable Operating Pressure based on line pipe will be:

$$MAOP = \frac{2\ St}{D} \times F \times E \times T$$

$$MAOP = \frac{2(52,000) \times .375}{16.000} \times 0.72 \times 1.0 \times 1.0 = 1754 \text{ psig}$$

$$MAOP = \frac{2(42,000) \times .438}{16.000} \times 0.72 \times 1.0 \times 1.0 = 1655 \text{ psig}$$

16.000

$$MAOP = \frac{2(52,000) \times .500}{16.000} \times 0.72 \times 1.0 \times 1.0 = 2340 \text{ psig}$$

Maximum Allowable Operating Pressure based on the riser piping will be:

$$MAOP = \frac{2(60,000) \times .625}{16.000} \times 0.5 \times 1.0 \times 1.0 = 2,343 \text{ psig}$$

This pipeline segment is designed to 1440 psig, however, it is limited to a maximum allowable pressure of 1174 psig, due to the 20" to which it will be connected having a MAOP of 1174 psig.

12. The anticipated operating pressures are estimated to range from 500 psig to 1,123 psig.

13. The design capacity of the line is 180 MMCFD based on an inlet pressure of 1,123 psig and an outlet pressure of 1,113 psig.

14. The 16 inch pipeline will be hydrostatically tested to a minimum pressure of 2,115 psig not exceeding a maximum pressure of 2,161 psig and held for 8 hours. The riser piping will be hydrostatically tested to a minimum pressure of 4,312 psig not exceeding a maximum pressure of 4,405 psig and held for 4 hours.

    The ANSI 600# and 900# valves, flanges and fittings will not be subjected to a body test pressure greater that 2,175 and 3,250 psig, respectively.

15. The design pipe depth is shown on Drawing No. 22-12-6029/DI-A-001, sheet 3 of 4.

16. The platform risers below water will be coated with 3 mils (dry) of inorganic zinc-rich primer and then flake glass filled epoxy phenolic for a total dry film thickness of 24 to 40 mils.

    The piping above-water will be coated with 3 mils (dry) inorganic zinc-rich primer and then Hi-Build catalyzed epoxy for a total dry film thickness of 15 mils.

17. All piping, fittings, risers and components of the pipeline are designed in compliance with 49 CFR 192.

18. Construction information:

Estimated Starting Date:	December 1, 1979
Method of Construction:	Lay Barge
Method of Burial:	Jet Bury Barge
Estimated time required to lay and bury pipe:	2 weeks
Estimated time to complete project:	4 weeks

19. Company Contact:

    Paul E. Newton, Senior Permit Engineer
    Transcontinental Gas Pipe Line Corporation
    P. O. Box 1396
    Houston, Texas 77001
    Telephone (713) 871-2533

Enclosed are three copies each of the maps and drawings referred to above, prepared and certified in accordance with applicable guidelines. Also enclosed is an engineering data attachment of three pages.

A certified copy of the articles of incorporation and a certificate of the Assistant Secretary, under seal, certifying that the corporate officer executing the application has the authority to do so have already been submitted to your office. These documents have been placed on record in a file identified as New Orleans Miscellaneous File No. 011. A filing fee of $100.00, together with the first year's rental of $30.00 computed on 1.41 miles of right-of-way, is enclosed.

Also enclosed please find a Nondiscrimination in Employment statement executed by a Vice President of Transcontinental Gas Pipe Line Corporation.

If the above and attached information meets with your approval, we would appreciate your issuing the necessary right-of-way at your earliest convenience. Inquiries concerning this application may be directed to the applicant at P. O. Box 1396, Houston, Texas 77001.

Very truly yours,

TRANSCONTINENTAL GAS PIPE LINE
CORPORATION

By _____
Vice President

Enclosures

LESSEES AND RIGHT-OF-WAY HOLDERS
VERMILION AREA

Block 25

Oil & Gas

OCS-G 3390	Transco Exploration Company Freeport Oil Company Pioneer Production Corporation Energy Development Corporation The Continental Group Inc. McMoRan Offshore Exploration Co. Mesa Petroleum Co.

Pipeline Right-Of-Way

OCS-G 3363	Trunkline Gas Company P/L
OCS-G 3628	Trunkline Gas Company P/L

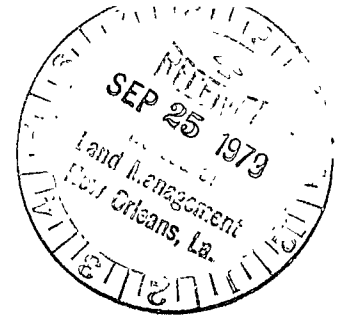
Block 26

Oil & Gas

OCS 0297	Amoco Production Company
OCS 0297	Union Oil Company of California

Pipeline Right-Of-Way

OCS 0882	Trunkline Gas Company
OCS 0890	" " "
OCS 0654	" " "
OCS 0882-A	" " "
OCS-G 3363	" " "
OCS-G 2121	Tenneco Inc.
" "	Columbia Gulf Transmission Company
OCS-G 4026	Columbia Gulf Transmission Company



NOTE: This form must be executed as an original.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

NONDISCRIMINATION IN EMPLOYMENT

As a condition precedent to the approval of the granting of the subject pipeline right-of-way, the grantee Transcontinental Gas Pipe Line Corporation hereby agrees and consents to the following stipulation which is to be incorporated into the application for said right-of-way.

During the performance of this grant the grantee agrees as follows:

> During the performance under this grant, the grantee shall fully comply with paragraphs (1) through (7) of section 202 of Executive Order 11246, as amended, (reprinted in 41 CFR 60-1.4 (a)), which are for the purpose of preventing discrimination against persons on the basis of race, color, religion, sex or national origin. Paragraphs (1) through (7) of section 202 of Executive Order 11246, as amended, are incorporated in this grant by reference.

Signature of Grantee
Vice President

Date: September 21, 1979

ENGINEERING DATA
VERMILION BLOCKS 25 - 26 / 16" PIPELINE

1. The pipeline will be buried to a minimum depth of 3 feet except at pipeline crossings since the water depth does not exceed 200 feet at any point.

2. The proposed pipeline will cross one (1) existing pipeline maintaining 18" minimum separation between lines as shown on typical crossing drawing number 22-0000/A-13830.

3. All valves and fittings on the submerged component will be buried to a minimum of one (1) foot below the mudline.

4. The length of the line between the riser and proposed underwater tap valve is 7,464 feet or 1.41 miles.

5. The line pipe will be:

   16.000" O.D. x .375" W.T. API 5L Gr. x-52, 62.58 lbs/ft.

   16.000" O.D. x .438" W.T., API 5L Gr. x-42, 72.80 lbs/ft.

   16.000" O.D. x .438" W.T., API 5L Gr. x-52, 72.80 lbs/ft.

   16.000" O.D. x .500" W.T., API 5L Gr. x-52, 82.77 lbs/ft.

6. The riser piping at the platform will be:

   16.000" O.D. x .625" W.T., API 5L Gr. x-60, 102.63 lbs/ft.

7. The water depth ranges from 24 feet at the McMoran Block 25 "FP" platform to 20 feet at the existing Transcontinental 20" pipeline in Block 26, all in the Vermilion Area.

8. The cathodic protection system will be Galvalum III bracelet anodes, as described on Drawing 22-12-6029/DI-A-001, Sheet 4 of 4.

9. The products to be transported by the pipeline are natural gas and condensate, neither of which is corrosive to carbon steel pipe interior. However, the analysis of the transported product will be monitored and preventive measures such as pigging and/or inhibiting will be employed as necessary.

10. Protective coatings used on the underwater line pipe are:

    16" x .375" W.T., 1-1/2" concrete, 9/16" mastic.
    16" x .438" W.T., 1-1/4" concrete, 9/16" mastic.
    16" x .500" W.T., 1-1/4 concrete, 9/16" mastic.

11. The bulk specific gravity of the empty pipe in seawater is:

PIPE SIZE	S.G.
16.000" x .375"	1.24
16.000" x .438"	1.27
16.000" x .500"	1.33

12. The anticipated specific gravity of the natural gas is 0.65 and the condensate is 0.72.

13. The design working pressure of the system is as follows:

Maximum Allowable Operating Pressure based on valves and flanges will be 1,440 psig (maximum working pressure of ANSI 600 valves and flanges).

Maximum Allowable Operation Pressure based on line pipe will be:

$$MAOP = \frac{2\ St}{D} \times F \times E \times T$$

$$MAOP = \frac{2(52,000) \times .375}{16.000} \times .72 \times 1.0 \times 1.0 = 1754 \text{ psig}$$

$$MAOP = \frac{2(42,000) \times .438}{16.000} \times 0.72 \times 1.0 \times 1.0 = 1655 \text{ psig}$$

$$MAOP = \frac{2(52,000) \times .438}{16.000} \times .72 \times 1.0 \times 1.0 = 2049 \text{ psig}$$

$$MAOP = \frac{2(52,000) \times .500}{16.000} \times .72 \times 1.0 \times 1.0 = 2340 \text{ psig}$$

Maximum Allowable Operating Pressure based on the riser piping will be:

$$MAOP = \frac{2(60,000) \times .625}{16.000} \times 0.5 \times 1.0 \times 1.0 = 2343 \text{ psig}$$

Although the pipeline segment is designed to 1440 psig, it is limited to a maximum allowable pressure of 1174 psig, since the 20" pipeline to which it is connected in Block 26 has an MAOP of 1174 psig.

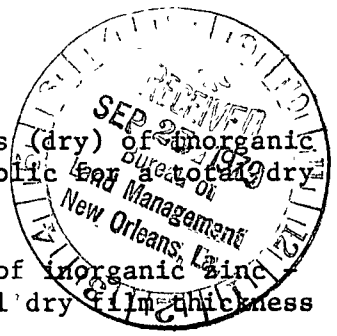
14. The anticipated operating pressures are estimated to range from 500 psig to 1123 psig.

15. The design capacity of the line is 180 MMCFD based on inlet pressure of 1123 psig and outlet pressure of 1113 psig.

16. The hydrostatic test pressure and hold time for the pipeline will be 2115 to 2161 psig for 8 hours. The riser will be hydrostatically tested at 4312 to 4405 psig for 4 hours.

The ANSI 600 and 900 valves, flanges and fittings will not be subjected to a body test greater than 2175 and 3250 psig, respectively.

17. The design burial depth is shown on Drawing No. 22-12-6029/DI-A-001, Sheet 3 of 4.



18. The platform riser below water will be coated with 3 mils (dry) of inorganic zinc-rich primer, and then flake glass-filled epoxy phenolic for a total dry film thickness of 24 and 40 mils.

    The above water piping will be coated with 3 mils (dry) of inorganic zinc-rich primer and then Hi-Build catalyzed epoxy for a total dry film thickness of 15 mils.

19. All piping, fittings, riser and components of the pipeline are designed in compliance with 49 CFR 192.

20. Construction information:

A.	Estimated Starting Date:	December 1, 1979
B.	Method of Construction:	Lay Barge
C.	Method of Burial:	Jet Bury Barge
D.	Estimated Time Required to Lay and Bury Pipe:	2 weeks
E.	Estimated Time to Complete Project:	4 weeks

21. Company Contact:

Paul E. Newton, Senior Permit Engineer
Transcontinental Gas Pipe Line Corporation
P.O. Box 1396 Houston, Texas 77001
Telephone: (713)871-2533

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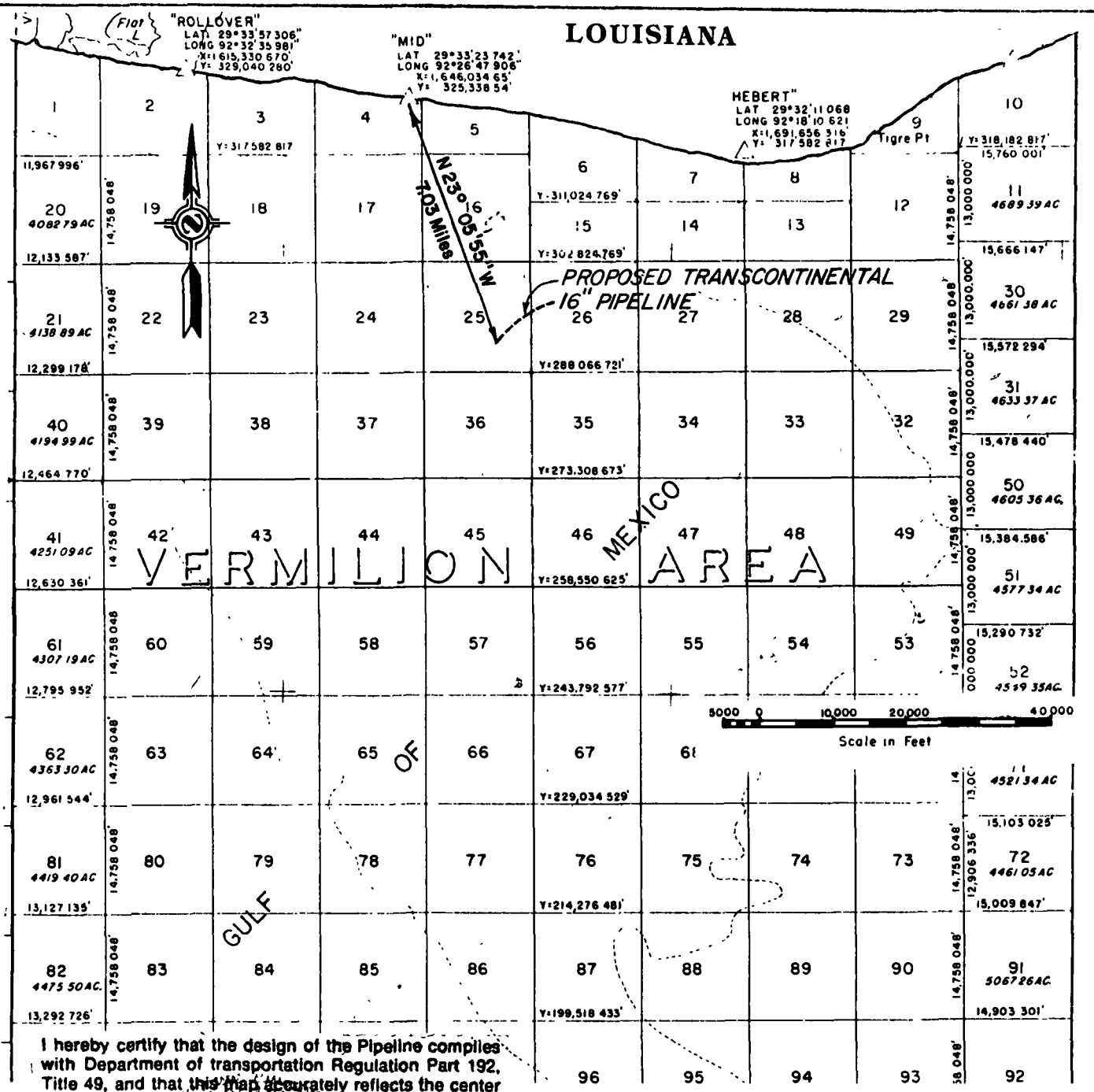

I hereby certify that the design of the Pipeline complies with Department of transportation Regulation Part 192, Title 49, and that this map accurately reflects the center line of the proposed Pipeline right-of-way.

RUSSELL J. JUDAH
REG No. 11416
REGISTERED
PROFESSIONAL ENGINEER
IN
PETROLEUM INDUSTRIAL ENGINEERING

RECEIVED
SEP 25 1979
Bureau of
Land Management
New Orleans, La.

7 SEPT '79
Date

11416
Number

Transcontinental Gas Pipe Line Corporation
A Subsidiary of Transco Companies Inc.
Engineering Department
Houston, Texas

PROPOSED 16" NATURAL GAS PIPE LINE
BLOCK 25 TO BLOCK 26
VERMILION AREA
OFFSHORE LOUISIANA

Drawn By DEM	Date 8-20-79	Approved By C.L.	Date 9-6-79
Checked By C.L.	Date 9-6-79	Approved By	Engineer
Approved By Drafting CWW	Date 9-6-79		
W. O. No. 5154.29	Scale SHOWN	General Group & Gun Number 22-12-6029	
DMC JEH	Sheet 1 of 4	Dwg. No. DI-A-001	

By | Revision | Date | No.

NOS-Y 4166

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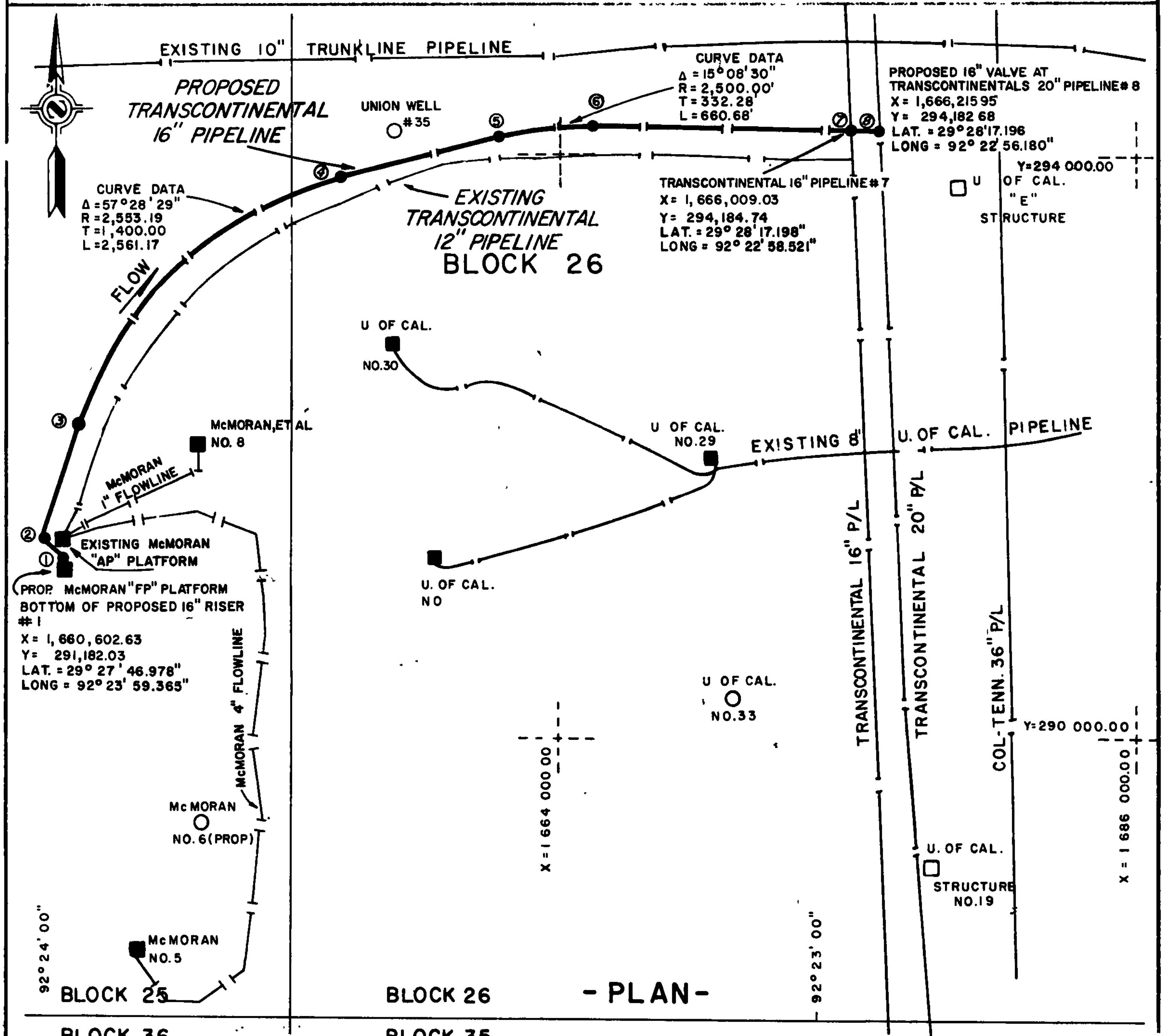

I hereby certify that the design of the Pipeline complies with Department of Transportation Regulation Part 192, Title 49, and that this map accurately reflects the center line of the proposed Pipeline right-of-way.

RUSSELL I. JUDAH
REG. No. 11416
REGISTERED PROFESSIONAL ENGINEER
IN
PETROLEUM/INDUSTRIAL ENGINEERING

SEP 25 1979
Bureau of Land Management
New Orleans, La.

7 SEPT '79 — Date

11416 — Number

Transcontinental Gas Pipe Line Corporation
Engineering Department
Houston, Texas
A Subsidiary of Transco Companies Inc.

PROPOSED 16" NATURAL GAS PIPE LINE
BLOCK 25 TO BLOCK 26
VERMILION AREA
OFFSHORE LOUISIANA

Drawn By K Johnston	Date 8-9-79	Approved By C. L.	Date 9-6-79
Checked By C. L.	Date 9-6-79	Approved By Henry D. Ingram	Engineer
Approved By Drafting CWW.	Date 9-6-79		
W. O. No. 5154.29	Scale 1" = 1000'	General Group & Gun Number	22-12-6029
DMC 84N	Sheet 2 of 4	Dwg. No.	DI-A-001

OCS-G 4166

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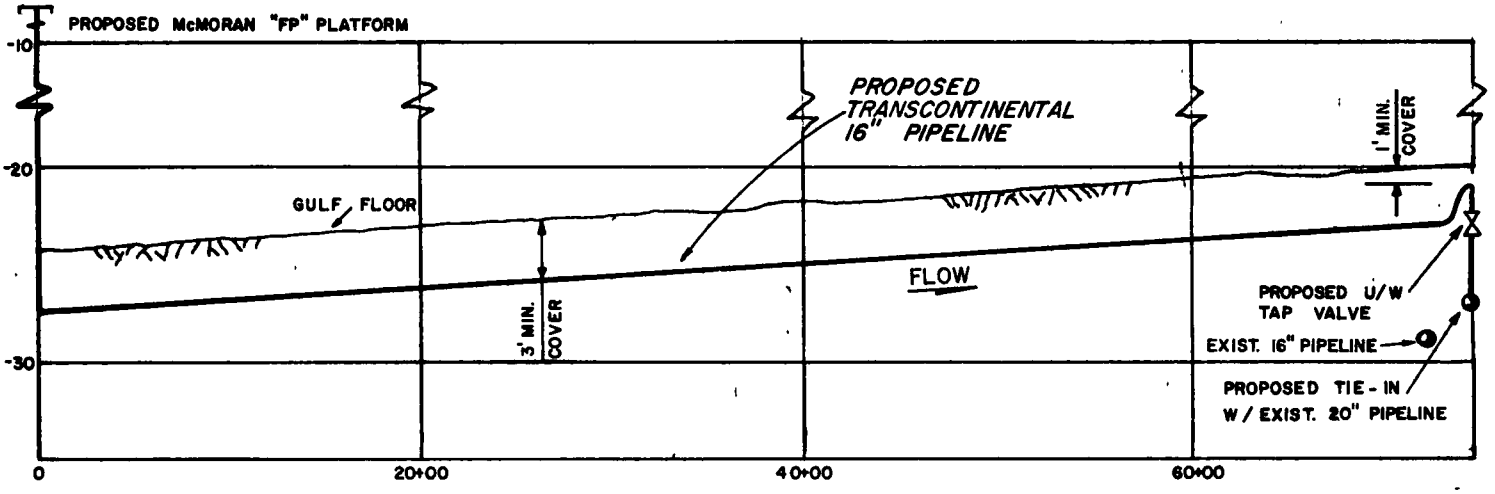


PROPOSED 16" PIPELINE

Points	Bearing	Distance	X	Y	Remarks
1			1,660,602.63	291,182.03	Bottom Proposed 16" Riser Block 25
1 - 2	N 50° 31' 23" W	250.00'	1,660,409.66	291,340.97	L R. Bend
2 - 3	N 17° 57' 18" E	851.57'	1,660,672 18	292,151 07	P.C. Curve Block 25
3 - 4	Curve	2,561.17'	1,662,458 73	293,835 08	P.T. Curve Block 26
4 - 5	N 75° 25' 47" E	1,141.86'	1,663,563.87	294,122.33	P.C Curve Block 26
5 - 6	Curve	660.68'	1,664,217.72	294,202.61	P.T. Curve Block 26
6 - 7	S 89° 25' 43" E	1,791.40'	1,666,009.03	294,184.74	Transcontinental 16" Pipeline
7 - 8	S 89° 25' 43" E	206.93'	1,666,215 95	294,182.68	Proposed 16" Valve on Transcontinental 20" Pipeline
Total = 7,463.61 Feet (1.414 Miles) Proposed 16" Pipeline					

General Notes Applicable To Proposed Pipeline Contained Herein

1 Pipeline Contained Herein Will Be Used To Transport Natural Gas From The Louisiana Outer Continental Shelf To The Eastern Area of the United States

2 Proposed Permanent Right-of-Way Will Be 200' In Width.

3 Courses And Distances Shown Herein Are Based On Louisiana Lambert (South Zone) Grid

4 Total Footage Proposed 12" Pipeline = 7,463.61 Feet (1.4 14 Miles)

5 Elevations Shown Are Based On Local Water Level From Previous Recorded Company Data

I hereby certify that the design of the Pipeline complies with Department of transportation Regulation Part 192, Title 49

STATE OF LOUISIANA
RUSSELL J. JUDAH
REG. No. 11416
REGISTERED
PROFESSIONAL ENGINEER
IN
PETROLEUM INDUSTRIAL ENGINEERING

RECEIVED
SEP 25 1979
Bureau of
Land Management
New Orleans, La.

R. J. Judah

7 SEPT 79
Date

11416
Number

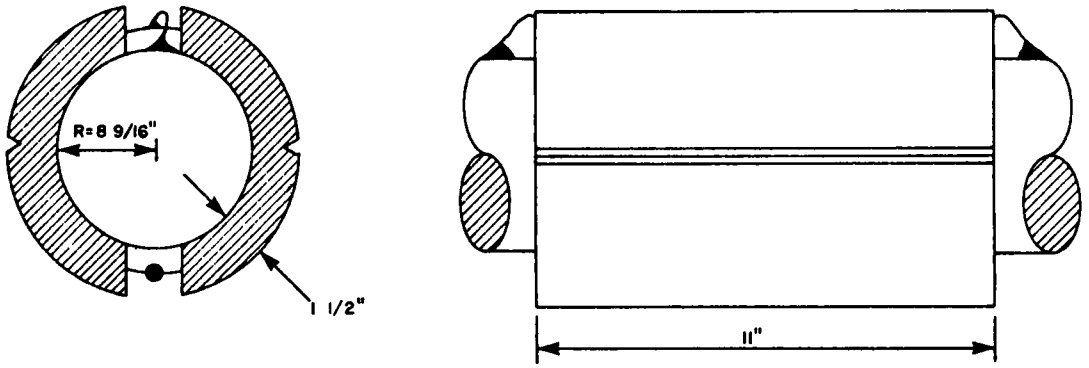
Transcontinental Gas Pipe Line Corporation Engineering Department Houston, Texas
A Subsidiary of Transco Companies Inc.

PROPOSED 16" NATURAL GAS PIPE LINE
BLOCK 25 TO BLOCK 26
VERMILION AREA
OFFSHORE LOUISIANA

Drawn By DEM	Date 8-30-79	Approved By C.L.	Date 9-6-79
Checked By C.L.	Date 9-6-79	Approved By Henry W. Ingram Engineer	
Approved By Drafting C.W.W.	Date 9-6-79		
W. O. No. 5154.25	Scale SHOWN	General Group & Gun Number 22-12-6029	
DMc PEW	Sheet 3 of 4	Dwg. No. DI-A-001	

No. Date By Revision

GALVALUM III BRACELETS



Weight: 116 LBS.

Scale: N.T S

NOTES:

1 Galvalum III Anodes Theoretical Rating = $\frac{0.1530 \text{ Amp. Year}}{\text{Lbs.}}$

Practical = 0.1530 x 75% Efficiency x 85% use factor = $\frac{0\ 0975 \text{ Amp Year}}{\text{Lbs.}}$

2 Assuming 2% Damaged Coating and .005 Amperes Per Square Foot Required for Protection.
Current Required = CR
CR = Total Area x 0.02 x 0.005
= 31,263.50 Sq. Ft.x 0.0001
CR = 3.126 Amperes

3. Pounds of Galvalum III Required for 40 Years Protection:
Lbs. = (3.126 Amperes/$\frac{0.0975 \text{ Amp. Year}}{\text{Lb.}}$) x 40 Years
Lbs. = 1,282.60

4 17-1/8" I.D. Galvalum III Anodes: 116 Lbs. Each.
Number of Anodes Required = N.R.
N.R. = 11.056
N.R. = 12.

5. 12-17 1/8" I.D. Galvalum III Anodes, On 670 Foot Spacing Will Be Installed On This Line. The First Anode On The Pipeline Will Be 100 Foot Northeast Of McMoran "FP" Platform, Blk. 25. There Will Be One Anode At The Base Of The Riser Assembly; Making A Total Of 13 Anodes Used.

6. Pipeline To Environment Voltages Will Be Observed At The Platform After The Line Is In Place To Assure That Adequate Corrosion Protection Is Being Provided

I hereby certify that the design of the Pipeline complies with Department of Transportation Regulation Part 192, Title 49.

STATE OF LOUISIANA
RUSSELL J. JUDAY
REG. No. 1
REGISTERED
PROFESSIONAL
IN
PETROLEUM ENGINEERING

RECEIVED
SEP 25 1979
Bureau of
Land Management
New Orleans, La.

7 SEPT 79
Date

11416
Number

Transcontinental Gas Pipe Line Corporation — Engineering Department, Houston, Texas
A Subsidiary of Transco Companies Inc.

PROPOSED 16" NATURAL GAS PIPE LINE
BLOCK 25 TO BLOCK 26
VERMILION AREA
OFFSHORE LOUISIANA

Drawn By DEM	Date 8-29-79	Approved By C.L.	Date 9-6-79
Checked By C.L.	Date 9-6-79		
Approved By Drafting C.W.W.	Date 9-6-79	Approved By Engineer	
W. O. No. E154.29	Scale	General Group & Gun Number 22-12-6029	
DNC	Sheet 4 of 4	Dwg. No. DI-A-001	

Revision — No. — By — Date

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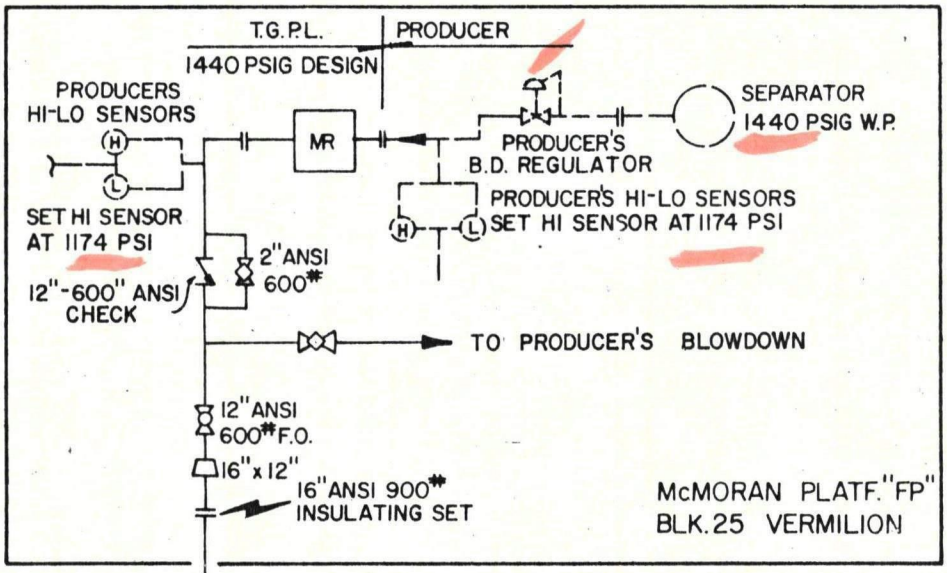


16" ANSI 600# F.O. BALL

16"

FLOW

16" ANSI 900# CHECK

16" ANSI 900# F.O. BALL

EXISTING T.G.P.L. 20" O.D. x .500" W.T. X-42 Pipe
BLOCK 26" VERMILION
MAOP 1174 PSIG
OCS-0876

LINE PIPE LEGEND

16" - .375" W.T. API 5L Gr. X-52
16" - .438" W.T. API 5L Gr. X-52
16" - .438" W.T. API 5L Gr. X-42
16" - .500" W.T. API 5L Gr. X-52

I hereby certify that the design of the Pipeline complies with Department of transportation Regulation Part 192, Title 49.

STATE OF TEXAS
P. T. PRIESMEYER
9001
REGISTERED PROFESSIONAL ENGINEER

P. T. Priesmeyer

9-11-79
Date

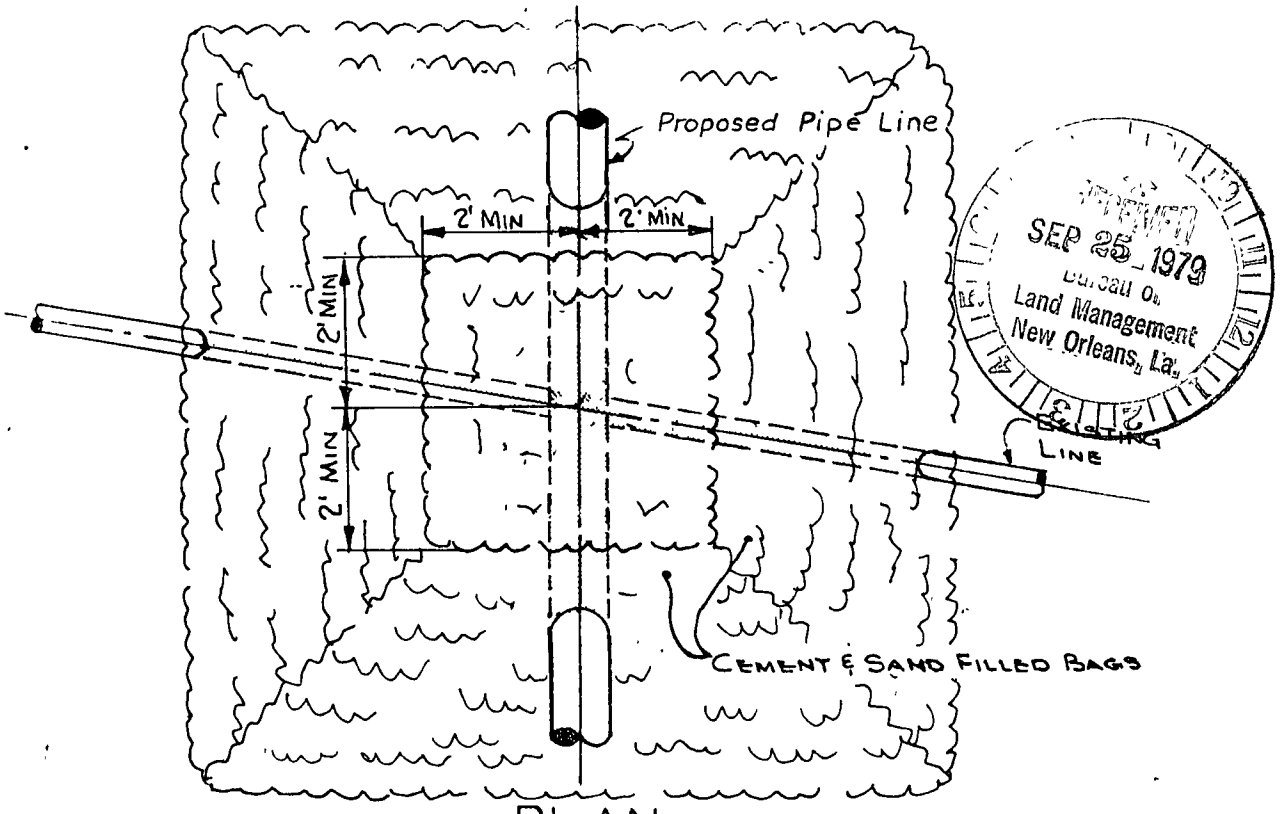
9001
Number

Transcontinental Gas Pipe Line Corporation Engineering Department Houston, Texas
A Subsidiary of Transco Companies Inc.

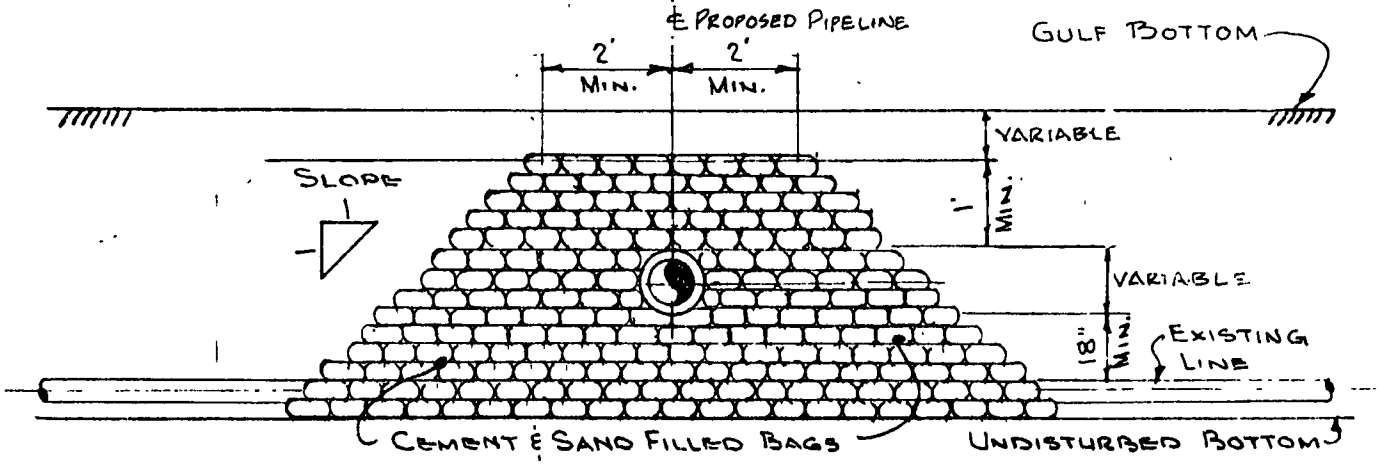
FLOW SCHEMATIC
PROPOSED 16" PIPELINE
McMORAN PLATFORM "FP"
BLOCK 25 TO BLOCK 26
VERMILION AREA

Drawn By DEM	Date 9/7/79	Approved By DMC	Date 9-11-79
Checked By M—	Date 9-11-79	Paul T. Priesmeyer	
Approved By Drafting CWW.	Date 9-11-79	Approved By Engineer	
W. O. No. 5154.29	Scale NONE	General Group & Gun Number 22-12-6029	
	Sheet 1 of 1	Dwg. No. DI-A-002	

By / Revision / Date / No.



PLAN



ELEVATION

NOTES:

(1) CEMENT & SAND MIXTURE SHALL BE 1 TO 3 PARTS BY WEIGHT.
(2) BAGS SHALL BE MADE OF CLOSELY WOVEN MATERIAL WITH A WICKING ACTION.
(3) AFTER FILLING THE BAG IT SHALL BE CLOSED BY SEWING OR THE EQUIVILENT BUT NOT BY BUNCHING AND TYING THE END.

REFERENCE DRAWINGS

DWG. NO.

Transcontinental Gas Pipe Line Corporation

ENGINEERING DEPARTMENT — HOUSTON, TEXAS

TYPICAL SEPARATION BARRIER CROSSING OF OFFSHORE PIPE LINE / CABLE

DESIGNED BY	DATE	CORRECT BY GEH	DATE 4-10-78
DRAWN BY CD	DATE 4-3-78	APPROVED BY H.W.L.	DATE 4/6/78
CHECKED BY C.L	DATE 4-10-78	APPROVED BY Paul J. Priesmeyer ENGINEER	
TRACED BY	DATE		
W. O. NO	SCALE None	GP 05 & GUN	22-0000
I.S. 7918	SHEET 1 OF 1	DWG NO	A-13830

BY | REVISION | DATE | NO.

Form 1541-3
(July 1965)
(formerly 4-1599 a)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCS-G 4166

CONFIRMATION/REPORT OF TELEPHONE CONVERSATION

TO	Name: Paul Newton	FROM	Name: Autry Britton
	Office: Transcontinental Gas P/L Corporation		Office: OCS
	Location: Houston, Texas		Location: New Orleans, La.
	Telephone Number: (713) 871-2533		Telephone Number: 589-3522

Purpose of Call:

To obtain additional information on their right-of-way application.

INFORMATION:

- What is the density of concrete used?

- Should Item four (4) of the general notes on DWG No. DI-A-001 sheet 3 of 4 state "the proposed pipeline is 16" instead of 12"."

Explanatory Remarks:

Mr. Newton stated that the density of concrete used will be 140 lbs./ft.^{3}. The proposed pipeline should be 16-inches instead of 12-inches as stated on DWG No. DI-A-001 Sheet 3 of 4.

9-26-79
(Date)

Autry J. Britton
(Signature)

CONFIRMATION COPY

4166

Revised 8/20/79

PIPELINE APPLICATION CHECK LIST

INSTRUCTIONS: Check the blank on the left if the statement is affirmative or correct data submitted. Mark N/A (not applicable) where appropriate. Place an X in the blank if the answer is no or if the data was not submitted. All blanks marked X must be rectified to a check (or qualified) before approval can be given for the pipeline. Enter data in the blanks furnished.

A. Verify the following general information:

I. SOP

✓ a. Do the leases involved on the P/L application appear on the current Suspension of Production (SOP) Lease List?

II. POD

____ a. Is the pipeline presently covered by an approved Plan of Development (POD)?

III. USGS Application

____ a. The applicant is a Federal lease holder and the pipeline is to be used for such purposes as:

____ 1. Moving production to a control point for gathering, treating, storing, or measuring.

____ 2. Delivery of production to a point of sale.

____ 3. Delivery of production to a pipeline operated by a transportation company.

____ 4. Moving fluids in connection with lease operations, such as for injection purposes.

____ b. The pipeline is within the lease boundary owned by the operator (If yes, include 30 CFR 250.19(b) in approval.)

____ c. Pipeline is within contiguous lease boundaries. (If yes, include 30 CFR 250.19(b) in approval.)

____ d. Pipeline is within non-contiguous lease boundaries. (If yes, include 30 CFR 250.18(c) and 30 CFR 250.19(b) in approval.)

____ e. Lessee's "intent to cross" letters are received. (Wait 30 days for letters of objection. Only objections concerning interference with lease operations will be considered.)

____ f. Pursuant to Secretarial Order 2974 of April 30, 1975, check the following:

_____ 1. FWS notified _____.

_____ 2. FWS comment received _____.

_____ 3. BLM notified _____.

_____ 4. BLM comment received _____.

_____ 5. Environmental Impact Evaluations completed _____.

_____ 6. If related to new POD/P, date of POD/P approval _____.

IV. BLM Application

✓ a. The pipeline must not be a gathering line.

V. DOT Pipelines

✓ a. The pipelines are shoreward of the outlet flange at the first process facility (If yes, include 49 CFR 192 for gas P/L or 49 CFR 195 for oil P/L in approval.)

VI. DOI Pipelines

NA a. Pipelines not covered by V above.

B. Verify that the information shown on the safety equipment schematic drawing contains the following:

✓ I. The pipeline leaving the platform receiving production from the platform is equipped with high- and low-pressure sensors to directly or indirectly shut-in the well or wells on the platform.

NA II. The pipeline delivering production to production facilities on the platform is equipped with automatic fail close valve tied into the automatic and remote shut-in system.

NA III. The pipeline crossing the production platform which does not deliver production to the platform, but which may or may not receive production from the platform, is equipped with high- and low-pressure sensors connected to an automatic fail close valve located in the upstream portion of the pipeline at the platform. In addition, the sensors are tied into either the platform's automatic and remote shut-in system or an independent remote shut-in system.

NA IV. The pipeline boarding the platform is equipped with a check valve.

✓ V. The pipeline leaving the platform is equipped with a check valve.

NA VI. The pipeline pump is shown as well as its associated high- and low-pressure shut-in device.

NA VII. If pipeline pilots are located on any pressure vessel or downstream of a departing check valve, all flow restriction(s), (backpressure valve(s), chokes), downstream of the process vessel, or wellhead, and upstream if check valve(s) must be indicated on the schematic.

If flow restriction(s) exist downstream of any process vessel a a low pressure sensor must be installed between the flow restriction(s) and the departing check valve(s). High-pressure sensor(s) must be installed downstream of the wellhead choke.

Reference API RP 14C, Pages 23 and 59

✓ VIII. Pressure source is drawn into the schematic with the following:

✓ a. Source SEPARATOR.

✓ b. Maximum source pressure, psig 1,440 (HI PILOT SET TO 1174 PSIG)

IX. The rated working pressures of all separators, pumps, compressors, valves, flanges, and fittings upstream of and including the boarding automatic fail close valve are shown.

1,440

C. Verify that the location plat depicts the following:

✓ I. Location of pipeline

✓ II. Length of pipeline

✓ III. Size of pipeline

✓ IV. Type of service

✓ V. Direction of flow

✓ VI. X-Y coordinates of key ponts

D. Verify that the information given on the submitted data sheet is completed; and calculate the $MAOP_{sc}$, $MAOP_{rc}$, $MAOP_{p/l}$.

I. General information for calculating $MAOP_{sc}$, $MAOP_{rc}$, etc.

a. Size of pipeline, inches 16

b. Weight of pipeline, lbs./ft. 62.58 / 72.72 / 82.77

c. Grade of pipeline X-52 X-42/52 X-52

d. Wall thickness, inches .375 .438 .5

e. Size of riser, inches 16

f. Weight of riser, lbs./ft. 102.63

g. Grade of riser X-60

h. Wall thickness of riser, inches .625

i. Minimum WP rating of piping, fittings, valves, psig 1,440

j. Hydrostatic test pressure (HTP), psig 2,115 - 2,161 / 4,312 - 4,405 (R.Scan)

k. Hold time, hrs. 8 / 4

l. Classification of pipeline ~~(oil or~~ gas) GAS

m. Type of pipe (ASTM A-106, API-5L, etc.) API 5L
NOTE: If ASTM A-53 Reference API RP 14E, Section 2.1.a(2)

WORST CASE .438 WT X-42

III. DOT Pipelines

a. IP @ SMYS for submerged pipeline = $\frac{2st}{D}$ = 2,300

b. (.72 x IP @ SMYS) for submerged pipeline = 1,656 ($MAOP_{sc}$)

c. IP @ SMYS for riser = $\frac{2st}{D}$ = 4,688

d. ~~For oil P/L (.60 x IP @ SMYS) for riser =~~ ($MAOP_{rc}$)

For gas P/L (.50 x IP @ SMYS) for riser = 2,344

e. See Ii above 1,440 ($MAOP_{pfv}$)

f. Limit of Testing

NA 1. For oil P/L

Is 1.25 MSP ≦ HTP ≦ .95 (IP @ SMYS for smaller IP of a and c above)

~~= = =~~

✓ 2. For gas P/L riser component:

Is 1.50 MSP = HTP of riser = .95 (IP @ SMYS of c above)

2,160 ≦ 4,312-4,405 ≦ 4,453

✓ 3. For gas P/L submerged component:

Is 1.25 MSP = HTP of submerged component = .95 (IP @ SMYS of a above WORST CASE

1,800 ≦ 2,115-2,161 ≦ 2,185

g. $MAOP_{p/l}$ based on HTP

~~1. For oil P/L HTP 1.25 =~~

2. For gas P/L riser component HTP/1.5 = 2,875 of riser

3. For gas P/L submerged component HTP/1.25 = 1,692 of submerged component

h. ~~For oil P/L Is HTP hold time ≥ 24 hours~~

For gas P/L Is HTP hold time ≥ 8 hours

i. MAOP of receiving pipeline from IV 1,174

j. $MAOP_{p/l}$ = the smallest of b, d, e, g, and i above

1,174 ($MAOP_{p/l}$)

k. Test pressure ANSI & API carbon steel RTJ & RF flanges and valves

2,175 (From table 3.1, page 31 API RP 14E)

l. Is k > HTP

NOTE: If not, add statement in approval letter to insure valves and flanges are not subjected to test pressure.

m. Is j ≥ MSP

1,174 ≥ 1,440

If not, one of the following is necessary:

X 1. Redundant safety equipment is afforded

X 2. A departure from the requirement for redundant safety equipment.

IV. Pipeline Receiving Production (Installed Prior to July 31, 1977)

BLM OCS 0647
Built 7-16-59
operating at
MAT. OF 1,174 psig
DP

		Submerged Component	Riser
a.	Size, inches	20"	
b.	Grade	—	
c.	Wall thickness, inches		
d.	Minimum working pressure of valves and flanges	(MAOPpfv)	
e.	Date of last hydrostatic test		
f.	HTP, psig		
g.	Hold time, hrs.		
h.	MAOP based on HTP HTP/1.25		
i.	IP@SMYS for submerged P/L 2ST/D		
j.	(.72 x IP@SMYS) for submerged P/L	(MAOPsc)	
k.	IP@SMYS for riser 2ST/D		
l.	(.60 x IP@SMYS) for riser	(MAOPrc)	

m. If the receiving P/L is a DOT gas P/L and has not been tested since July 1, 1971, then what is the HAOP* to which the segment was subjected during the 5 years prior to July 1, 1976? _____

n. MAOP of receiving P/L ≥ MAOP of proposed P/L ≥ MSP of proposed P/L

1,174 ≥ 1,174 ≥ 1,440
At Pilot Cut TD

*HAOP - Highest actual operating pressure 1,174

E. Verify that the information was given on the submitted data sheet is complete; and calculate the life expectancy of the pipelines corrosion protection ($LE_{p/l}$)

I. General Information for Calculating $LE_{p/l}$

✓ a. Type of corrosion protection (platform anodes, P/L anodes, or rectifier

✓ b. If pipeline anodes are used:

1. Type of anode GALVALUM III
2. Spacing interval, ft. 670
3. Weight of unit anode, lbs. 116

II. Calculate Life Expectancy of Corrosion Protection

NA a. If platform anodes are used, annual pipe-to-electrolyte potential measurements are required.

✓ b. If pipeline anodes are used:

$LE_{p/l} = 3.82 \times 10^4 \times W^o/DIR? =$ 43.06

W^o = weight of one anode, pounds =

D = outside diameter of pipe, inches

I = interval = length of pipe, feet ÷ total number of anodes

R = comsumption rate, lbs./amp-yr.

✓ c. Is our calculated $LE_{p/l}$ = 20 years.

If not, one of the following is necessary:

NA 1. The company agrees to increase their cathodic protection to meet the 20-year requirement.

NA 2. Annual pipe-to-electrolyte potential measurements will be required.

F. Verify that the information given on the submitted data sheet is complete; and calculate the specific gravity on the pipeline ($SP_{p/l}$)

I. General Information pertaining to $SG_{p/l}$

a. Description of pipelines protective coating _____

b. Description of risers protective coating 3 mils Primer 24-40 mils Epoxy

c. Description of pre-concrete coating _____

d. Density of concrete, lbs./cu. ft. _____

e. Thickness of concrete, inches 1½ (1¼)

f. Thickness of asphalt/somastic _____

g. Gravity or density of products:

For gas .65 (air = 1.0)

For oil/condensate ——— ° API, ——— (water = 1.0)

h. Given $SG_{p/l}$ 1.24

II. $SG_{p/l}$

Worst case
.375 WT X-52 pipe

NA a. Expoxy-coated pipelines:

$SG_{p/l} = 2.865\ W/D^2$

W = weight of bare pipe, lbs./ft.

D = diameter of pipe, inches

$K_1 = -8.57$
$K_2 = 73.32$
$K_3 = 102.4$
~~P~~ $= 27.45$

____ b. For weighted pipelines:

$$SG_{p/l} = \frac{dc}{d} + \left[\frac{k_2}{(T-k_1)^2}\left(\frac{W+P}{k_3} - \frac{dc}{d}\right)\right] = \frac{140}{64} + \left[\frac{73.32}{(10.07)^2}\left(\frac{62.58+27.45}{102.4} - \frac{140}{64}\right)\right] =$$

dc = density of concrete, lbs./ft/^{3}

d = density of fluid in which pipeline is submerged, lbs./ft.^{3}

k_1, k_2, k_3 = coefficients from tables

T = thickness of concrete coating, inches

W = weight of bare pipe, lbs./ft.

77.14 P = weight of double enamel coat and felt wrap, or weight of asphaltmastic coating, lbs./ft.

$SG_{p/l}$ = 1.24

✓ c. Is our calculated SG = operator's given SG

1.24 = 1.24 / 1.27 / 1.33

NOTE: These values should be approximately the same. If not, resolve. If the SG is close to a value of 1, the pipeline is unacceptable and must be weighted with concrete or anchored securely to the bottom.

G. Verify the following general information:

I. Water Depth, ft. 24 (Max) 20 (Min)

II. Burial Depth, ft. 3

III. Maximum Operating Pressure (MOP) 1,174

IV. Capacity 180 M^2CF/D @ 1,113 psig